1	BE-LIST, ELECTRICAL EQUIPMENT
2	CE-LIST, ELECTRICAL CABINET
3	MACHINE
4	ELECTRICAL DOCUMENT
5	STANDARD EQUIPMENT
6	EXTRA EQUIPMENT
7	SPARE PARTS
8	CONTROL PANEL
9	SIDE PROTECTION
10	CIRCUIT DIAGRAM, POS. SUMMARY
11	DRAWINGS
12	LINE SUMMARY
13	TERMINAL SUMMARY
14	PROTECTIVE BONDING
15	ALTERATION MESSAGES
16	PLC-DIAGRAM, LIST OF BLOCKS
17	LIST OF ADDRESSES
18	VOLUME ADAPTION DOC.
19	FUNCTION DIAGRAM
20	PROGRAM LIST
21	MOUNTING DRAWINGS
22	CONNECTION DIAGRAMS, DRAWINGS
23	MAINS CONNECTION
24	TERMINAL AND ALARMDISP. DRAWINGS
25	MACHINE DEVIATIONS
26	REBUILDING KITS
27	
28	
29	
30	
31	

AM: 19666
573377
DATE: 930630
SIGN: BWM/JAB
INDEX FOR TBA/8-100V
TETRA PAK

C GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 648022

ECN NUMBER: EC 17829 EC 19666 EC 70775
DATE DISTRIBUTED 93-04-21 93-09-01 97-05-30

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0010	ELECTRICAL CABINET	CE- 67035-100V	-			1
	. DCS8, DESIGN CONTR. PRO	C- 47832-010V				
	. RACK WALLMOUNTED 84TE	C- 67369-0102				
	. BACKPLANE 8TE	C- 67372-010V				
	. TPIH 2000 GENERATOR	C- 67600-0501				
	. . POWER CARD	C- 67577-0501				
	. . . THIH TOROID COIL 1	C- 67564-0101				
	. . . TPIH TOROID COIL 2	C- 67565-0101				
	. . . TPIH TOROID COIL 3	C- 67566-0101				
	. . . TPIH THERMOSTAT CAB	C- 67567-0101				
	. . . TPIH COIL SINGLE LA	C- 67568-0101				
	. . . TPIH TANK COIL	C- 67569-0101				
	. . . TPIH CAPACITOR CARD	C- 67570-0101				
	. . . TPIH TRANSISTOR PAC	C- 67573-0101				
	. . . OUTPUT TRANSFORMER	C- 67574-0401				
	. . . TPIH TRANSISTOR PAC	C- 67581-0101				
	. . . TPIH HEATSINK PRERE	C- 67582-0101				
	. . TPIH FAN HOLDER	C- 67578-0101				
	. . . TPIH INTERNAL TRANS	C- 67575-0101				
	. . CONTROL CARD	C- 67579-0501				
	. . . TPIHTRANSFORMER CON	C- 67576-0101				
	. . FRONT PANEL	C- 67580-0201				
	. SHUNT RESISTOR FOR SSR	C- 68444-010V				
	. TMCC, CONTROLLER	C- 558230-010V				
	. . TMCC, MAIN PCB	C- 558370-010V				
	. ELECTRICAL CABINET	C- 971250-010V				
I 0020	MACHINE TBA/8	CE- 67036-100V	-			1
I 0030	ELECTRICAL DOCUMENT	CE- 67038-100V	-			1
	. ELECTRICAL CABINET	CE- 67035-100V				
	. . DCS8, DESIGN CONTR. P	C- 47832-010V				

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
	. . RACK WALLMOUNTED 84TE	C- 67369-0102				
	. . BACKPLANE 8TE	C- 67372-010V				
	. . TPIH 2000 GENERATOR	C- 67600-0501				
	. . . POWER CARD	C- 67577-0501				
	. . . . THIH TOROID COIL	C- 67564-0101				
	. . . . TPIH TOROID COIL	C- 67565-0101				
	. . . . TPIH TOROID COIL	C- 67566-0101				
	. . . . TPIH THERMOSTAT C	C- 67567-0101				
	. . . . TPIH COIL SINGLE	C- 67568-0101				
	. . . . TPIH TANK COIL	C- 67569-0101				
	. . . . TPIH CAPACITOR CA	C- 67570-0101				
	. . . . TPIH TRANSISTOR P	C- 67573-0101				
	. . . . OUTPUT TRANSFORME	C- 67574-0401				
	. . . . TPIH TRANSISTOR P	C- 67581-0101				
	. . . . TPIH HEATSINK PRE	C- 67582-0101				
	. . . TPIH FAN HOLDER	C- 67578-0101				
	. . . . TPIH INTERNAL TRA	C- 67575-0101				
	. . . CONTROL CARD	C- 67579-0501				
	. . . . TPIHTRANSFORMER C	C- 67576-0101				
	. . . FRONT PANEL	C- 67580-0201				
	. . SHUNT RESISTOR FOR SS	C- 68444-010V				
	. . TMCC, CONTROLLER	C- 558230-010V				
	. . . TMCC, MAIN PCB	C- 558370-010V				
	. . ELECTRICAL CABINET	C- 971250-010V				
	. MACHINE TBA/8	CE- 67036-100V				
	. STANDARD EQUIPMENT	CE- 67039-100V				
	. EXTRA EQUIPMENT	CE- 67040-100V				
	. SPARE PART	CE- 67072-100V				
	. . SHUNT RESISTOR FOR SS	C- 68444-010V				
	. CONTROL PANEL TBA/8	CE- 68068-100V				
	. . MULTI PURPOSE POTENTI	C- 558389-010V				
	. . CONTROL PANEL	C- 971411-010V				
	. SIDE PROTECTION TBA/8	CE- 68916-100V				
	. . SIDE PANEL	C- 971444-010V				
I 0040	STANDARD EQUIPMENT	CE- 67039-100V	-			1
I 0050	EXTRA EQUIPMENT	CE- 67040-100V	-			1
I 0060	SPARE PART	CE- 67072-100V	-			1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
	. SHUNT RESISTOR FOR SSR	C- 68444-010V				
I 0070	CONTROL PANEL TBA/8	CE- 68068-100V	-			1
	. MULTI PURPOSE POTENTIOM	C- 558389-010V				
	. CONTROL PANEL	C- 971411-010V				
I 0080	SIDE PROTECTION TBA/8	CE- 68916-100V	-			1
	. SIDE PANEL	C- 971444-010V				

GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER:	EC 17829	EC 19666	EC 20127	EC 20588	EC 20667	EC 22843	EC 70684	EC 70775
DATE DISTRIBUTED	93-04-21	93-09-01	94-06-02	94-11-10	95-03-29	95-12-05	97-03-21	97-05-30
	EC 71023	EC 71182	EC 71424					
	97-10-23	97-11-17	98-03-13					

GROUP FREQUENCY

VARIANT DESCRIP: -1001 HZ-50
-1002 HZ-60

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
A002:1	BACKPLANE 8TE	C- 67372-010V		S		1	1
A003:1	BACKPLANE 8TE	C- 67372-010V		S		1	1
A004	THCC, CONTROLLER	C- 558230-010V		S		1	1
	. THCC, MAIN PCB	C- 558370-010V					
A004:1	DCS8, DESIGN CONTR. PROG.	C- 47832-010V		S		1	1
A004:2	BACKPLANE 8TE	C- 67372-010V		S		1	1
A401	TPIH 2000 GENERATOR	C- 67600-0501		C		1	1
	. POWER CARD	C- 67577-0501					
	. . THIH TOROID COIL 1	C- 67564-0101					
	. . TPIH TOROID COIL 2	C- 67565-0101					
	. . TPIH TOROID COIL 3	C- 67566-0101					
	. . TPIH THERMOSTAT CABLE	C- 67567-0101					
	. . TPIH COIL SINGLE LAYE	C- 67568-0101					
	. . TPIH TANK COIL	C- 67569-0101					
	. . TPIH CAPACITOR CARD	C- 67570-0101					
	. . TPIH TRANSISTOR PACKA	C- 67573-0101					
	. . OUTPUT TRANSFORMER	C- 67574-0401					
	. . TPIH TRANSISTOR PACKA	C- 67581-0101					
	. . TPIH HEATSINK PREREGU	C- 67582-0101					
	. TPIH FAN HOLDER	C- 67578-0101					
	. . TPIH INTERNAL TRANSFO	C- 67575-0101					
	. CONTROL CARD	C- 67579-0501					

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	. . TPIHTRANSFORMER CONT.	C- 67576-0101					
	. FRONT PANEL	C- 67580-0201					
A402	TPIH 2000 GENERATOR	C- 67600-0501	C			1	1
	. POWER CARD	C- 67577-0501					
	. . THIH TOROID COIL 1	C- 67564-0101					
	. . TPIH TOROID COIL 2	C- 67565-0101					
	. . TPIH TOROID COIL 3	C- 67566-0101					
	. . TPIH THERMOSTAT CABLE	C- 67567-0101					
	. . TPIH COIL SINGLE LAYE	C- 67568-0101					
	. . TPIH TANK COIL	C- 67569-0101					
	. . TPIH CAPACITOR CARD	C- 67570-0101					
	. . TPIH TRANSISTOR PACKA	C- 67573-0101					
	. . OUTPUT TRANSFORMER	C- 67574-0401					
	. . TPIH TRANSISTOR PACKA	C- 67581-0101					
	. . TPIH HEATSINK PREREGU	C- 67582-0101					
	. TPIH FAN HOLDER	C- 67578-0101					
	. . TPIH INTERNAL TRANSFO	C- 67575-0101					
	. CONTROL CARD	C- 67579-0501					
	. . TPIHTRANSFORMER CONT.	C- 67576-0101					
	. FRONT PANEL	C- 67580-0201					
R202	SHUNT RESISTOR FOR SSR	C- 68444-010V	US			1	1
0001	ELECTRICAL CABINET	C- 971250-010V	-			1	1
0030	RACK WALLMOUNTED 84TE	C- 67369-0102	S			1	1
A002	MOTOR DRIVE CONTR.PME1802	2- 90430-0037	S			1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 352550-0136 FINE-WIRE 3,15 A						
	REPLACED BY						ECN
	3- 90430-0067 MOTOR DRIVE CONTROL						26277
A003	MOTOR DRIVE CONTR.PME1802	2- 90430-0037	S			1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 352550-0136 FINE-WIRE 3,15 A						

>>>>>>> CONTINUES ON NEXT PAGE >>>>>>>>

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	REPLACED BY						ECN
	3- 90430-0067 MOTOR DRIVE CONTROL						26277
A012	SAFETY RELAY JSBR4	2- 90119-0072	C			1	1
A013	SAFETY RELAY JSBR3	2- 90119-0080	C			1	1
A101	ENCODER MODULE	2- 90025-0016	S			1	1
	NOT USED IN NEW DESIGNS						
A101:1	TERMINAL BLOCK	3- 90025-0025	S			1	1
	NOT USED IN NEW DESIGNS						
A102	INPUT MODULE	2- 90025-0017	S			1	1
	NOT USED IN NEW DESIGNS						
A102:1	TERMINAL BLOCK	3- 90025-0024	S			1	1
	NOT USED IN NEW DESIGNS						
A103	INPUT MODULE	2- 90025-0017	S			1	1
	NOT USED IN NEW DESIGNS						
A103:1	TERMINAL BLOCK	3- 90025-0024	S			1	1
	NOT USED IN NEW DESIGNS						
A104	INPUT MODULE	2- 90025-0017	S			1	1
	NOT USED IN NEW DESIGNS						
A104:1	TERMINAL BLOCK	3- 90025-0024	S			1	1
	NOT USED IN NEW DESIGNS						
A105	INPUT MODULE	2- 90025-0017	S			1	1
	NOT USED IN NEW DESIGNS						
A105:1	TERMINAL BLOCK	3- 90025-0024	S			1	1
	NOT USED IN NEW DESIGNS						
A106	INPUT MODULE	2- 90025-0017	S			1	1

>>>>>>> CONTINUES ON NEXT PAGE >>>>>>>

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	NOT USED IN NEW DESIGNS						
A106:1	TERMINAL BLOCK	3- 90025-0024		S		1	1
	NOT USED IN NEW DESIGNS						
A107	INPUT MODULE	2- 90025-0017		S		1	1
	NOT USED IN NEW DESIGNS						
A107:1	TERMINAL BLOCK	3- 90025-0024		S		1	1
	NOT USED IN NEW DESIGNS						
A108	COMPACT RACK	1- 90025-0052		C		1	1
	NOT USED IN NEW DESIGNS						
A110	INPUT MODULE	2- 90025-0017		S		1	1
	NOT USED IN NEW DESIGNS						
A110:1	TERMINAL BLOCK	3- 90025-0024		S		1	1
	NOT USED IN NEW DESIGNS						
A114	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A114:1	TERMINAL PLINTH	3- 90025-0054		S		1	1
	NOT USED IN NEW DESIGNS						
A115	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A115:1	TERMINAL PLINTH	3- 90025-0054		S		1	1
	NOT USED IN NEW DESIGNS						
A116	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A116:1	TERMINAL PLINTH	3- 90025-0054		S		1	1

>>>>>>> CONTINUES ON NEXT PAGE >>>>>>>

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	NOT USED IN NEW DESIGNS						
A117	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A117:1	TERMINAL PLINTH	3- 90025-0054		S		1	1
	NOT USED IN NEW DESIGNS						
A118	RACK	1- 90025-0058		C		1	1
	NOT USED IN NEW DESIGNS						
A120	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A120:1	TERMINAL PLINTH	3- 90025-0054		S		1	1
	NOT USED IN NEW DESIGNS						
A121	OUTPUT MODULE	2- 90025-0053		S		1	1
	NOT USED IN NEW DESIGNS						
A121:1	TERMINAL PLINTH	3- 90025-0054		S		1	1
	NOT USED IN NEW DESIGNS						
A128	RACK	1- 90025-0058		C		1	1
	NOT USED IN NEW DESIGNS						
A128:1	RACK TERMINATION	90025-0022		-		1	1
	NOT USED IN NEW DESIGNS						
A201	TEMP.REG. PHILIPS KS40	2- 90410-0051		P		1	1
A201:1	SIGN"PRESTERILISATION V."	359241-0123		C		1	1
A201:2	SIGN HOLDER	2- 359240-0100		C		1	1
A202	TEMP.REG. PHILIPS KS40	2- 90410-0051		P		1	1
A202:1	SIGN "STEAM"	359241-0121		C		1	1
A202:2	SIGN HOLDER	2- 359240-0100		C		1	1
A203	TEMP.REG. PHILIPS KS40	2- 90410-0051		P		1	1
A203:1	SIGN"PEROXIDE BATH WATER"	359241-0141		C		1	1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
A203:2	SIGN HOLDER	2- 359240-0100	C			1	1
A204	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A204:1	SIGN "AIR SUPER HEATER"	359241-0130	C			1	1
A204:2	SIGN HOLDER	2- 359240-0100	C			1	1
A205	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A205:1	SIGN "STRIP APPLICATOR"	359241-0132	C			1	1
A205:2	SIGN HOLDER	2- 359240-0100	C			1	1
A206	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A206:1	SIGN"LONGITUDINAL SEALING	359241-0131	C			1	1
A206:2	SIGN HOLDER	2- 359240-0100	C			1	1
A207	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A207:1	SIGN"TEMP.AIR KNIFE"	359241-0126	C			1	1
A207:2	SIGN HOLDER	2- 359240-0100	C			1	1
A208	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A208:1	SIGN,"TEMP.-SPLICING"	359241-0251	C			1	1
A208:2	SIGN HOLDER	2- 359240-0100	C			1	1
A209:1	SIGN, UNENGRAVED	4- 359240-0001	C			7	7
A209:2	SIGN HOLDER	2- 359240-0100	C			7	7
A213	TEMP.REG. PHILIPS KS40	2- 90410-0051	P			1	1
A213:1	SIGN"TEMP.PEROXIDE BATH"	359241-0125	C			1	1
A213:2	SIGN HOLDER	2- 359240-0100	C			1	1
A301	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A302	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A303	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A304	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A305	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A306	LEVEL CONTROL DEVICE	3- 90314-0038	S			1	1
A401:1	FEMALECONT.15POLE HARTING	90110-0121	C			2	2
A401:2	COVER HARTING 09060009957	90110-0122	C			2	2
A401:3	T.S. LEFT HAND JAWS	359241-0261	C			1	1
A401:4	SIGN HOLDER	2- 359240-0100	C			1	1
A402:1	FEMALECONT.15POLE HARTING	90110-0121	C			2	2
A402:2	COVER HARTING 09060009957	90110-0122	C			2	2
A402:3	T.S. RIGHT HAND JAWS	359241-0260	C			1	1
A402:4	SIGN HOLDER	2- 359240-0100	C			1	1
A403:4	SIGN HOLDER	2- 359240-0100	C			1	1
A450	CURRENT RELAY SYRELEC	3- 90119-0077	S			1	1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
A451	CURRENT RELAY SYRELEC	3- 90119-0077		S		1	1
D108	PROCESSOR	1- 90025-0070		C		1	1
	NOT USED IN NEW DESIGNS						
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	90334-0006 BATTERY						
D108:1	TERMINAL BLOCK	4- 90025-0094		S		1	1
	NOT USED IN NEW DESIGNS						
E001	FLUORESCENT TUBE 9W	90297-0006		UP		1	1
E001:1	HOLDING FIXTURE	3- 90164-0301		S		1	1
E002	FLUORESCENT TUBE 9W	90297-0006		UP		1	1
E002:1	HOLDING FIXTURE	3- 90164-0301		S		1	1
F001	FUSE 25A FERRAZ	4- 90233-0029		UP		3	3
	* 25A						
F001:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S		3	3
F002	FUSE 25A FERRAZ	4- 90233-0029		UP		3	3
	* 25A						
F002:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S		3	3
F003	FUSE 10A FERRAZ	4- 90233-0028		UP		3	3
	* 10A						
F003:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S		3	3
F005	FUSE 16A FERRAZ10,3X38,2	4- 90233-0027		UP		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	4- 90233-0305 INDICATOR				ST	1	
	* 16A						
F005:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S		1	1
F006	FUSE 16A FERRAZ10,3X38,2	4- 90233-0027		UP		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	4- 90233-0305 INDICATOR				ST	1	

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP UN	1001	1002
	* 16A					
F006:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S	1	1
F008	FUSE 10A FERRAZ	4- 90233-0028		UP	1	1
	* 10A					
F008:1	FUSEHOLDER FERRAZ ST10	3- 90233-0303		S	1	1
F020	FUSE 3P 10A K ABB-STOTZ	3- 90007-0147		S	1	1
F022	FUSE 1P 10A K ABB-STOTZ	3- 90007-0129		S	1	1
F023	FUSE 1P 10A K ABB-STOTZ	3- 90007-0129		S	1	1
F025	FUSE 1P 10A K ABB-STOTZ	3- 90007-0129		S	1	1
F026	FUSE 1P 16A K ABB-STOTZ	3- 90007-0131		S	1	1
F027	FUSE 1P 10A K ABB-STOTZ	3- 90007-0129		S	1	1
F028	FUSE 1P 10A K ABB-STOTZ	3- 90007-0129		S	1	1
F029	FUSE 1P 16A K ABB-STOTZ	3- 90007-0131		S	1	1
G001	MOTOR DRIVE CONTROL	1- 90430-0036		S	1	1
	NOT USED IN NEW DESIGNS					
	CONSISTS OF / SPARE PART			SP UN	QTY	
	3- 352550-0120 FINE-WIRE 315 MA					
G100	POWER SUPPLY UNIT	2- 90025-0055		C	1	1
	NOT USED IN NEW DESIGNS					
	CONSISTS OF / SPARE PART			SP UN	QTY	
	3- 352551-0136 FINE-WIRE FUSE 3,15A					
K001	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US	1	1
	CONSISTS OF / SPARE PART			SP UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S	1	
K002	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US	1	1
	CONSISTS OF / SPARE PART			SP UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S	1	
K004	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US	1	1

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K005	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K006	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K007	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K008	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		-		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K009	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K010	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K011	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K012	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K013	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K014	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K015	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K016	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K018	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K019	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K020	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K022	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K023	CONTACTOR 7,5KW COIL24VDC	2- 90075-0125		US		1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS			S		1	
K030	CONTACTOR 22KW COIL24VDC	2- 90075-0126		US		1	1

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
	CONSISTS OF / SPARE PART				SP UN	QTY	
	3- 90075-0313 AUXILIARY CONTACTS					1	
K101	RELAY OMRON 24VDC MY4	4-	90119-0086		US	1	1
K101:1	BASE: OMRON TYPE PYF 14AE		90119-0309		S	1	1
K101:2	CLAMP:OMRON TYPE PYC-A1		90119-0310		S	1	1
K102	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K102:1	BASE 11 POLE	3-	90129-0006		S	1	1
K104	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K104:1	BASE 11 POLE	3-	90129-0006		S	1	1
K105	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K105:1	BASE 11 POLE	3-	90129-0006		S	1	1
K106	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K106:1	BASE 11 POLE	3-	90129-0006		S	1	1
K108	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K108:1	BASE 11 POLE	3-	90129-0006		S	1	1
K109	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K109:1	BASE 11 POLE	3-	90129-0006		S	1	1
K110	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K110:1	BASE 11 POLE	3-	90129-0006		S	1	1
K111	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K111:1	BASE 11 POLE	3-	90129-0006		S	1	1
K112	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K112:1	BASE 11 POLE	3-	90129-0006		S	1	1
K113	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K113:1	BASE 11 POLE	3-	90129-0006		S	1	1
K121	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K121:1	BASE 11 POLE	3-	90129-0006		S	1	1
K125	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K125:1	BASE 11 POLE	3-	90129-0006		S	1	1
K126	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K126:1	BASE 11 POLE	3-	90129-0006		S	1	1
K127	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K127:1	BASE 11 POLE	3-	90129-0006		S	1	1
K128	PLUG-IN RELAY 24VDC	3-	90119-0056		US	1	1
K128:1	BASE 11 POLE	3-	90129-0006		S	1	1
K202	OPTO SWITCH	3-	90119-0043		S	1	1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
K203	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K204	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K205	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K206	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K209	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K210	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
K211	SOLID-STATE RELAY H12WD	3- 90119-0067	US			1	1
L001	BALLAST COIL 50/60HZ	3- 90297-0306	S			1	1
P002	RECORDER	2- 90332-0020	P			1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	4- 90332-0324 INK ROLLER						
	4- 90332-0325 RECORDER CHARTS						
P003	3 DIGIT COUNTER KOYO	90053-0028	S			1	1
P003:1	BASE KOYO KF-03-K	90053-0309	S			1	1
P004	HOURCOUNTER BOWER B609.10	3- 90053-0031	S			1	1
P005	PACK.COUNTER	3- 90053-0032	S			1	1
P006	PACK.COUNTER	90053-0029	S			1	1
P006:1	CABLE 2X0,75 MM2 SCREENED	90220-0040	C	M		4	4
Q001	OVERLPROT.PKZM 4A	2- 90095-0075	S			1	1
	* 2,5-4A						
Q001:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q001:2	ADAPTER PLATE K&M SP	90259-0310	S			22	22
Q001:3	ADAPTER PLATE K&M SP00	3- 90259-0312	S			2	2
Q001:4	BUSBAR HOLDER K&MSH0165/2	90135-0031	S			8	8
Q001:5	CABLE CLAMP K&M	3- 90135-0038	S			12	12
Q001:6	FEED THROUGH TERM. WDU 6	3- 353021-0214	S			17	17
Q001:7	END PLATE WAP 2,5-10	4- 353032-0004	C			6	6
Q001:8	END BRACKET WEW 35/2	3- 353031-0203	C			10	10
Q002	OVERLPROT.PKZM 6,3A	2- 90095-0076	S			1	1
	* 4-6,3A						
Q002:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q003	OVERLPROT.PKZM 2,5A	2- 90095-0074	S			1	1
	* 1,6-2,5A						

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
Q008:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q009	OVERLPROT.PKZM 4A	2- 90095-0075	S			1	1
	* 2,5-4,0A						
Q009:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q010	OVERLPROT.PKZM 10A	2- 90095-0077	S			1	1
	* 6,3-10A						
Q010:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q011	OVERLPROT.PKZM 2,5A	2- 90095-0074	S			1	1
	* 1,6-2,5A						
Q011:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q012	OVERLPROT.PKZM 10A	2- 90095-0077	S			1	1
	* 6,3-10A						
Q012:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q013	OVERLPROT.PKZM 1,6A	2- 90095-0073	S			1	1
	* 1,0-1,6A						
Q013:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q014	OVERLPROT.PKZM 1,6A	2- 90095-0073	S			1	1
	* 1,0-1,6A						
Q014:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q030	OVERLPROT.PKZM 25A	2- 90095-0080	S			1	1
	* 20-25A						
Q030:1	AUX.CONTACT K&M NHI21	3- 90259-0313	S			1	1
Q101	SWITCH 100A	2- 90111-0131	C			1	1
	CONSISTS OF / SPARE PART			SP	UN	QTY	
	90111-0332 NEUTRAL CONTACT						
Q101:2	SIGN "MAIN SWITCH"	359241-0124	C			1	1
Q101:3	SIGN HOLDER	2- 359240-0100	C			2	2
Q101:4	PADLOCK	779910-0101	C			1	1
Q101:5	SIGN "400/230V;50HZ;63A"	4- 359241-0297	C			1	-

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
Q101:6	SIGN "400/230V;60HZ;63A"	4- 359241-0298	C		-	1	
Q102	OVERLOAD RELAY 63-80A	2- 90259-0030	C		1	1	
	" 63-80A						
R003	POTENTIOMETER 10 KOHM	90130-0017	S		1	1	
R003:1	KNOB 3-DIGITS	90130-0301	C		1	1	
R003:2	T.S. LEFT HAND JAWS	359241-0261	C		1	1	
R003:3	SIGN HOLDER	2- 359240-0100	C		1	1	
R004	POTENTIOMETER 10 KOHM	90130-0017	S		1	1	
R004:1	KNOB 3-DIGITS	90130-0301	C		1	1	
R004:2	T.S. RIGHT HAND JAWS	359241-0260	C		1	1	
R004:3	SIGN HOLDER	2- 359240-0100	C		1	1	
R005:3	SIGN HOLDER	2- 359240-0100	C		1	1	
R108	RESISTOR 150 OHM;5%;1/4W	4- 90121-0116	C		1	1	
R900:2	SIGN, UNENGRAVED	4- 359240-0001	C		1	1	
R900:3	SIGN HOLDER	2- 359240-0100	C		1	1	
S003	PUSH BUTTON RED	3- 90064-0085	S		1	1	
S003:1	SIGN "SHORT STOP"	359301-0110	C		1	1	
S004	KEY SWITCH,1 NO,1 NC CONT	3- 90111-0124	S		1	1	
S004:1	SIGN"CL.OF ST.BARRIER SP.	359241-0122	C		1	1	
S004:2	SIGN HOLDER	2- 359240-0100	C		1	1	
S005	KEY SWITCH,2 NO CONTACTS	3- 90111-0122	S		1	1	
S005:1	SIGN "SERVICE SWITCH"	359241-0133	C		1	1	
S005:2	SIGN HOLDER	2- 359240-0100	C		1	1	
S006	THUMB-WHEEL SELECTOR	3- 90111-0142	S		1	1	
S006:5	SIGN "THUMBWHEEL"	359320-0003	C		1	1	
S006:7	SIGN HOLDER	2- 359240-0100	C		1	1	
S007:2	SIGN HOLDER	2- 359240-0100	C		1	1	
S007:3	BLANK-OFF PLUG	90002-0014	C		1	1	
S015	SWITCH 2 POS. EA OLTEN	3- 90111-0120	S		1	1	
S015:1	SIGN "PREPARATIONS"	4- 359241-0324	C		1	1	
S015:2	SIGN HOLDER	2- 359240-0100	C		1	1	
S510	BLANK-OFF PLUG	90002-0014	C		1	1	
S510:1	SIGN, UNENGRAVED	4- 359240-0001	C		1	1	
S510:2	SIGN HOLDER	2- 359240-0100	C		1	1	
S511	BLANK-OFF PLUG	90002-0014	C		1	1	
S511:1	SIGN, UNENGRAVED	4- 359240-0001	C		1	1	

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
3511:2	SIGN HOLDER	2- 359240-0100	C			1	1
T001	TRANSF. 3PH 750VA SEC 23A	2- 90245-0019	C			1	1
T003	TRANSF. 1PH AUTO 2,1 KVA	3- 73139	C			1	1
V001	RECTIFIER 50A	3- 90038-0024	S			1	1
W001	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W002	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W003	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W004	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W005	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W006	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W007	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W008	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W009	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W010	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W011	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W012	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W013	CABLE CR/AL K 2X0,81 MM2	90220-0059	-	M		3	3
W014	CABLE 2X0,75 MM2 SCREENED	90220-0040	-	M		3	3
W016	CABLE OLFLEX 4X2,5 MM2	4- 90220-0105	-	M		2	2
W017	CABLE OLFLEX 4X2,5 MM2	4- 90220-0105	-	M		2	2
W018	COPPER BRAID	4-1143884	-			1	1
W019	COPPER BRAID	4-1143884	-			1	1
W020	COPPER BRAID	4-1143884	-			1	1
W021	COPPER BRAID	4-1143884	-			1	1
W022	COPPER BRAID	4-1143884	-			1	1
W023	COPPER BRAID	4-1143884	-			1	1
W024	COPPER BRAID	4-1143884	-			1	1
W025	COPPER BRAID	4-1143884	-			1	1
W026	COPPER BRAID	4-1143884	-			1	1
W027	CABLE OLFLEX 5X1,5 MM2	4- 90220-0108	-	M		2,5	2,5
W028	CABLE OLFLEX 5X1,5 MM2	4- 90220-0108	-	M		2,5	2,5
XL1 :1	DISTR.TERM.X.L50-52	4- 573378	C			1	1

POS.	DESCR.	PART N.	UN	Q.TY
:1	RAIL TS35//7.5	353042-0005	MM	640
:2	END BRACKET WEW35/2	353031-0203	PC	2
:3	FEED T. WDU 4	353021-0213	PC	19
:4	BRIDGE WQV 4/10	353034-0031	PC	2

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
:5	END PLATE 2,5-10	353032-0004			PC	3	
:6	MARKING PL5 FW1-50	359011-0807			PC	3	
XL1 :2	DISTR. TERM.,DIODE TERM.	4- 575976			C	1	1
* POS.	DESCR.	PART N.			UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005			MM	450	
:2	END BRACKET WEW35/2	353031-0203			PC	2	
:3	TERM. WDU 4	353021-0217			PC	44	
:4	FEED T. WTRD 2,5	353021-0122			PC	7	
:5	BRIDGE WQV 4/10	353034-0031			PC	5	
:6	END PLATE 2,5-10	353032-0004			PC	1	
:7	END PLATEW 2,5-10	353032-0005			PC	4	
:8	MARKING PL5 1-50	359011-0807			PC	6	
:9	FUSE TERM. WSI 6	353023-0102			PC	1	
:10	FINE-WIRE 1,6A	352550-0133			PC	1	
X001:1	TERMINAL BLOCK X1:1	4-1143956			C	1	1
* POS.	DESCR.	PART N.			UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005			MM	420	
:2	FEED T. WDU 4	353021-0213			PC	8	
:3	TERM. WDU 4	353021-0217			PC	14	
:4	EARTH TERM. WPE 4	353024-0205			PC	2	
:5	FEED T. WDU 6	353021-0214			PC	16	
:6	EARTH TERM. WPE 6	353024-0206			PC	4	
:7	MARKING PL5-GW (J)	359011-0819			PC	1	
:8	BRIDGE WQV 6/10	353034-0032			PC	2	
:9	MARK. PL5-FW 1-50	359011-0807			PC	2	
:10	FIG. 205-FW 201-250	359011-0811			PC	2	
:11	END PLATE W2,5-10	353032-0005			PC	1	
:12	END BRACKET 35/2	353031-0203			PC	3	
:13	END PLATE 2,5-10	353032-0004			PC	1	
X001:2	TERMINAL BLOCK X001:2	4-1143957			C	1	1
* POS.	DESCR.	PART N.			UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005			MM	580	
:2	FEED T. WDU 4	353021-0213			PC	48	
:3	EARTH TERM. WPE4	353024-0205			PC	17	

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POS	PART TITLE / REMARKS	PART NUMBER	R SP UN	1001	1002
:4	MARKING PL5-GW (J)	359011-0819	PC	1	
:5	MARK. PL5-FW 1-50	359011-0807	PC	2	
:6	MARK. PL5-FW 51-100	359011-0808	PC	2	
:7	FEED T. WDU 6	353021-0214	PC	3	
:8	EARTH TERM. WPE 6	353024-0206	PC	1	
X001:3	TERM. X1:3, CONTROL	4- 575810	C	1	1
C * POS.	DESCR.	PART N.	UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005	MM	580	
:2	TERM. WDU 4	353021-0217	PC	45	
:3	EARTH TERM. WPE 4	353024-0205	PC	12	
:4	MARKING PL5-GW (J)	359011-0819	PC	1	
:5	FIG. 205-FW 201-250	359011-0811	PC	2	
:6	SET OF SIG5 251-300	359011-0812	PC	2	
:7	END PLATEW 2,5-10	353032-0005	PC	1	
:8	END BRACKET 35/2	353031-0203	PC	1	
X001:4	TERM. X1:4, CONTROL	4- 575811	C	1	1
* POS.	DESCR.	PART N.	UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005	MM	420	
:2	TERM. WDU 4	353021-0217	PC	29	
:3	EARTH TERM. WPE 4	353024-0205	PC	9	
:4	MARKING PL5-GW (J)	359011-0819	PC	1	
:5	SET OF SIG5 301-350	359011-0813	PC	2	
:6	SET OF SIG5 350-400	359011-0814	PC	2	
:7	OPTO-RELAY	90119-0063	PC	2	
X002-3	NEUTR.AND GROUND TERMINAL	4-1143964	C	1	1
* POS.	DESCR.	PART N.	UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005	MM	570	
:2	END BRACKET 35/2	353031-0203	PC	2	
:3	SEP. WHP 2,5-10	353033-0104	PC	6	
:4	ZERO TERM. WNT 6	353022-0003	PC	23	
:5	SIGN BOARD	359011-0806	PC	1	
:6	HOLDER	353041-0106	PC	1	
:7	RAIL 10X3MS	353041-0001	MM	250	
:8	EARTH TERM. WPE 35	353024-0209	PC	3	

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POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
:9	EARTH TERM. WPE 10	353024-0207			PC	7	
:10	EARTH TERM. WPE 2,5	353024-0204			PC	23	
:11	EARTH TERM. WPE 4	353024-0205			PC	2	
:12	SIGN BOARD	359011-0806			PC	1	
X004	WALL SOCKET OUTLET	3- 90001-0033			S	1	1
X006	TERMINAL BLOCK X006	4-1143955			C	1	1
* POS.	DESCR.	PART N.			UN	Q.TY	
:1	FEED T. WDU 4	353021-0213			PC	1	
:2	EARTH TERM. WPE 4	353024-0205			PC	1	
:3	MARKING PL5-GW	359011-0819			PC	1	
:4	MARKING PL5-FW 1-50	359011-0807			PC	2	
X007	TERMINAL BK4 KRG 4-POLE	4- 90077-0102			S	1	1
X008	CONTACT UNIT 14-POLE	90110-0029			S	1	1
X009	CONTACT UNIT 4-POLE	90110-0028			S	1	1
X010	TERMINAL BLOCK X010.	4- 927280			-	1	1
* POS.	DESCR.	PART N.			UN	Q.TY	
:1	RAIL TS35//7.5	353042-0005			MM	280	
:2	OVERVOLT. PROTECTOR	90082-0013			PC	1	
:3	MARKING PL5-FW 1-50	359011-0807			PC	1	
:4	FEED T. WDU 35	353021-0219			PC	10	
:5	BRIDGE WQV 35/10	353034-0035			PC	5	
:6	MARKING PL5-GW (J)	359011-0819			PC	1	
:7	END BRACKET 35/2	353031-0203			PC	2	
:8	PART. WTW 2,5-10	353033-0105			PC	1	
X100	SLEEVE INSERT 24P.HARTING	3- 90110-0057			S	1	1
X100:1	SCREW HARTING PLUG	90110-0334			C	4	4
X101	SLEEVE INSERT 24P.HARTING	3- 90110-0057			S	1	1
X101:1	SCREW HARTING PLUG	90110-0334			C	4	4
X102	SLEEVE INSERT 24P.HARTING	3- 90110-0057			S	1	1
X102:1	SCREW HARTING PLUG	90110-0334			C	4	4
X103	SLEEVE INSERT 24P.HARTING	3- 90110-0057			S	1	1
X103:1	SCREW HARTING PLUG	90110-0334			C	4	4
X104	SLEEVE INSERT 24P.HARTING	3- 90110-0057			S	1	1
X104:1	SCREW HARTING PLUG	90110-0334			C	4	4

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
X105	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X105:1	SCREW HARTING PLUG	90110-0334	C			4	4
X106	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X106:1	SCREW HARTING PLUG	90110-0334	C			4	4
X107	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X107:1	SCREW HARTING PLUG	90110-0334	C			4	4
X108	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X108:1	SCREW HARTING PLUG	90110-0334	C			4	4
X109	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X109:1	SCREW HARTING PLUG	90110-0334	C			4	4
X111	SLEEVE INSERT 24P.HARTING	3- 90110-0057	S			1	1
X111:1	SCREW HARTING PLUG	90110-0334	C			4	4
Z100	FILTER 3-PH SIEMENS	1- 90024-0031	C			1	1
Z102	FILTERED TERMINAL BLOCK	3- 90024-0036	C			1	1
0005	SIGN "DELIVERED DESIGN"	3- 90194-0133	C			1	1
0010	SIGN "FLASH SIGN" 50X50MM	90194-0016	C			9	9
0020	SIGN "IDENTIF. OF WIRING"	3- 90194-0080	C			1	1
0030:1	CLAMP FOR SCR.CABLE 16MM	4- 90220-0302	S			2	2
0030:2	CLAMP FOR SCR.CABLE 10MM	3- 90220-0304	S			2	2
0030:3	LOCK WASHER AZ 3,2	90062-0058	S			4	4
0030:4	SLOTTED HEMCS3X25RFR	312125-0232	S			4	4
0030:5	WASHER BRB3,2X6RFR	315105-0124	S			8	8
0030:6	NUT M6H3RFR	312605-0310	S			8	8
0040	FUSE PANEL LABEL	3-1296409	C			1	1
0045	FUSE PANEL LABEL	3-1296412	C			1	1
1000	CABLE AWM BLACK 25,0	351179-0110	-		M	10	10
1005	CABLE AWM BLACK 6,0	351179-0107	-		M	48	48
1010	CABLE AWM BLACK 4,0	351179-0106	-		M	7	7
1015	CABLE AWM BLACK 2,5	351179-0105	-		M	21	21
1020	CABLE AWM BLACK 1,5	351179-0104	-		M	15	15
1025	CABLE AWM LIGHTBLUE 25,0	351173-0110	-		M	4	4
1030	CABLE AWM LIGHTBLUE 4,0	351173-0106	-		M	3	3
1035	CABLE AWM LIGHTBLUE 2,5	351173-0105	-		M	23	23
1040	CABLE AWM LIGHTBLUE 1,5	351173-0104	-		M	10	10
1045	CABLE AWM DARKBLUE 4,0	351172-0106	-		M	20	20
1050	CABLE AWM DARKBLUE 0.75	351172-0102	-		M	1000	1000
1055	CABLE AWM YELL/GREEN 16,0	351175-0109	-		M	5	5

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001	1002
1060	CABLE AWM YELL/GREEN 10,0	351175-0108		-	M	18	18
1065	CABLE AWM YELL/GREEN 6,0	351175-0107		-	M	12	12
1070	CABLE AWM YELL/GREEN 2,5	351175-0105		-	M	28	28
1075	CABLE AWM YELL/GREEN 1,5	351175-0104		-	M	6	6
1080	CABLE AWM YELL/GREEN 0.75	351175-0102		-	M	50	50
1085	CABLE AWM ORANGE 0,75	351180-0102		-	M	30	30
1090	CABLE AWM RED 4,0	351176-0106		-	M	6	6
1095	CABLE AWM RED 1,5	351176-0104		-	M	15	15
2000	CABLE AWM RED 0,75	351176-0102		-	M	78	78

GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER:	EC 17829	EC 19666	EC 20127	EC 20667	EC 70775	EC 71023
DATE DISTRIBUTED	93-04-21	93-09-01	94-06-02	95-03-29	97-05-30	97-10-23

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
A004:1	POTENTIOMETER UNIT	C- 558389-010V	S			1
	* PRINTED DESIGN CORRECTION					
0001	CONTROL PANEL	C- 971411-010V	S			1
A004:2	LABEL, PRINTED DES. CORR.	4- 551922	C			1
A100	PANEL INTERF.SATT CU64.1	1- 90025-0088	C			1
	NOT USED IN NEW DESIGNS					
A100:1	TERMINAL BLOCK	4- 90025-0089	S			4
	NOT USED IN NEW DESIGNS					
A100:2	TERMINAL BLOCK	4- 90025-0090	S			1
	NOT USED IN NEW DESIGNS					
A100:3	TERMINAL BLOCK	4- 90025-0091	S			1
	NOT USED IN NEW DESIGNS					
A100:4	TERMINAL BLOCK	4- 90025-0092	S			2
	NOT USED IN NEW DESIGNS					
A100:5	TERMINAL BLOCK	4- 90025-0093	S			2
	NOT USED IN NEW DESIGNS					
A100:6	TERMINAL BLOCK	4- 90025-0094	S			1
	NOT USED IN NEW DESIGNS					
A110	CIRCUIT BOARD, COMPONENTS	1- 577452-0001	S			1
	* CIRCUIT BOARD, SOLD SIDE. NO: 577452-0003.					
	CIRCUIT BOARD, COMP SIDE. NO: 577452-0004.					

POS	PART TITLE / REMARKS	PART NUMBER	R	SP UN	1001
A110:1	ALARM DISPLAY	4- 577430	S		1
	* CLICHE NO. 251043.				
R100	RESISTOR 150 OHM;5%;1/4W	4- 90121-0116	C		1
S001	EMERGENCY STOP BUTTON	3- 90064-0124	S		1
S001:1	SIGN "EMERGENCY STOP" YL	4- 486826-0001	C		1
	* EMERGENCY STOP				
S007	SWITCH 2 POS. EA OLTEN	3- 90111-0120	S		1
	* SELECTOR SWITCH				
S012	PUSH BUTTON WHITE	3- 90064-0082	S		1
	CONSISTS OF / SPARE PART			SP UN	QTY
	90036-0057 LIGHT BULB BA9S 28V		P		1
S012:1	SIGN "LAMP TEST"	359301-0130	C		1
	* LAMP TEST				
S019	PUSH BUTTON GREEN	3- 90064-0083	S		1
S019:1	SIGN "DROP CHUTE"	359301-0050	C		1
	* PACKAGE EJECTOR				
S02H	PUSH BUTTON"GREEN"	3- 90064-0093	S		1
	CONSISTS OF / SPARE PART			SP UN	QTY
	90036-0057 LIGHT BULB BA9S 28V		P		1
S02H:1	SIGN "INCHING"	359301-0090	C		1
	* INCHING				
S020	PUSH BUTTON GREEN	3- 90064-0083	S		1
S020:1	SIGN "FINAL FOLDER"	359301-0170	C		1
	* MANUAL FLUSHING FFU				
S09H	PUSH BUTTON"GREEN"	3- 90064-0093	S		1
	CONSISTS OF / SPARE PART			SP UN	QTY
	90036-0057 LIGHT BULB BA9S 28V		P		1

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
S09H:1	SIGN "INCH. FINAL FOLDER"	359301-0091	C			1
	* INCHING FINAL FOLDER					
S30H	PUSH BUTTON"GREEN"	3- 90064-0093	S			1
	CONSISTS OF / SPARE PART			SP	UN	QTY
	90036-0057 LIGHT BULB BA9S 28V			P		1
S30H:1	SIGN "STEP UP"	359301-0001	C			1
	* STEP UP					
S31H	PUSH BUTTON WHITE	3- 90064-0082	S			1
	CONSISTS OF / SPARE PART			SP	UN	QTY
	90036-0057 LIGHT BULB BA9S 28V			P		1
S31H:1	SIGN "STEP DOWN"	359301-0005	C			1
	* STEP DOWN					
S32H	PUSH BUTTON RED	3- 90064-0085	S			1
S32H:1	SIGN "SHORT STOP"	359301-0110	C			1
S33H	PUSH BUTTON WHITE	3- 90064-0082	S			1
	CONSISTS OF / SPARE PART			SP	UN	QTY
	90036-0057 LIGHT BULB BA9S 28V			P		1
S33H:1	SIGN "ALARM RESET"	359301-0105	C			1
	* ALARM RESET					
X005	TERMINAL BK2 KRG 2-POLE	4- 90195-0020	S			1
X107	PLUG 24-POLE HARTING	3- 90110-0128	S			1
I 0120	SIGN "DELIVERED DESIGN"	3- 90194-0133	C			1
0130	SIGN "FLASH SIGN" 50X50MM	90194-0016	C			1
0140	CU LITZ CABLE 15X2MM	90203-0009	C	MM		200

GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER:	EC 17829	EC 20127	EC 20667	EC 70775	EC 71023	EC 71182
DATE DISTRIBUTED	93-04-21	94-06-02	95-03-29	97-05-30	97-10-23	97-11-17

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0100	SHUNT RESISTOR FOR SSR	C- 68444-010V	-			2
0010	LIGHT BULB BA9S 28V	90036-0057	-			10
0020	DIODE HOLDER	90077-0341	-			2
0040	PUSH BUTTON GREEN	3- 90064-0083	-			1
0050	PLUG-IN RELAY 24VDC	3- 90119-0056	-			1
0060	SOLID-STATE RELAY H12WD	3- 90119-0067	-			1
0070	FUSE 10A FERRAZ	4- 90233-0028	-			10
0080	FINE-WIRE 315 MA	3- 352550-0120	-			2
	* G001 FREQUENCY CONVERTER					
0090	FUSE 16A FERRAZ10,3X38,2	4- 90233-0027	-			10
	CONSISTS OF / SPARE PART			SP	UN	QTY
	4- 90233-0305 INDICATOR				ST	1
0110	TOOL	90064-0315	-			1
0120	FUSE 25A FERRAZ	4- 90233-0029	-			10
0130	FINE-WIRE 6,3 A	3- 352551-0139	-			2
	* PANEL INTERFACE					
0140	FINE-WIRE 5 A	3- 352551-0138	-			2
	* PANEL INTERFACE					
0150	FINE-WIRE FUSE 3,15A	3- 352551-0136	-			2
	* G100 POWER SUPPLY UNIT					
0160	FINE-WIRE 3,15 A	3- 352550-0136	-			2
	* A003 UNREELING MOTOR PAPER SUPPLY,					
	A002 MOTOR BENDING ROLLER					

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
I 0165	OVERVOLTAGE PROTECTION	3- 90082-0301	-			1
0170	FINE-WIRE 1,6 A	3- 352550-0133	-			2
	* ALARM BEACON					
0180	RECORDER CHARTS	4- 90332-0325	-			1
0185	INK ROLLER	4- 90332-0324	-			1
0190	RESISTOR 150 OHM;5%;1/4W	4- 90121-0116	-			1

Tetra Pak BILL-OF-MATERIAL "0" DATE PRINTED: 97-06-02

I GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER: EC 17829 EC 70775
DATE DISTRIBUTED 93-04-21 97-05-30

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0100	MATCHING TRANSF. 65 KVA	2- 90245-0024	-			1

ENGINEER: BWM 93-04-16 CONTROL: SJR EXTRA EQUIPMENT CE- 67040-100V

Tetra Pak BILL-OF-MATERIAL "O" DATE PRINTED: 97-10-23

GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER:	EC 17829	EC 19666	EC 20127	EC 70175	EC 70577	EC 70684	EC 70775	EC 71023
DATE DISTRIBUTED	93-04-21	93-09-01	94-06-02	96-04-18	97-01-23	97-03-21	97-05-30	97-10-23

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
I 0010	PLC-DISKETTE	4- 47745-00:36	-			1

ENGINEER: BWM 93-04-16 CONTROL: SJR STANDARD EQUIPMENT CE- 67039-100V

General remark
ALL DOCUMENTS ARE TO BE DISTRIBUTED IN
SIZE A4.
BE-LIST 649171-1000 AND CE-LIST
67038-1000 ARE TO BE DELIVERED WITH THE
BELOW MENTIONED DOCUMENTS.

ECN	70003	70175	70577	70684	70775	71023	71182	71258	71424	71972
Release date	960314	960418	970123	970321	970530	971023	971117	971209	980313	981022

Chg	Position	S p	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column quantity All
	0001		ELECTRIC EQUIPMENT	A4-		649171-1000	BOM	000	AA		x
I	0005		ELECTRICAL DOCUMENT	A4-		67038-1000	BOM	000	AF		x
	0010		ELECTRICAL CABINET	A4-		67035-1000	BOM	000	AC		x
	0020		MACHINE	A4-		67036-1000	BOM	000	AD		x
	0030		STANDARD EQUIPMENT	A4-		67039-1000	BOM	000	AB		x
	0040		EXTRA EQUIPMENT	A4-		67040-1000	BOM	000	AA		x
	0050		SPARE PART	A4-		67072-1000	BOM	000	AB		x
	0060		CONTROL PANEL	A4-		68068-1000	BOM	000	AB		x
	0070		SIDE PROTECTION			68916-1000	BOM	000	AA		x
	0215		CIRCUIT DIAGRAM POS.SUMM.	A4-		44173-0000	ELD	002	43		x
	0230		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	005	30		x
	0235		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	006	18		x
	0240		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	007	01		x
	0245		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	008	18		x
	0250		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	009	36		x
	0255		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	010	18		x
	0265		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	011	18		x
	0275		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	012	36		x
	0285		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	013	18		x
	0290		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	014	18		x

Chg Position	S p	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column quantity All
0295		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	015	18		x
0305		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	017	01		x
0310		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	018	01		x
0320		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	019	18		x
0322		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	020	37		x
0325		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	021	18		x
0330		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	022	37		x
0350		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	025	37		x
0360		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	027	01		x
0365		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	028	01		x
0370		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	029	36		x
0375		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	030	01		x
0380		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	031	01		x
0385		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	032	30		x
0390		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	033	01		x
0405		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	034	01		x
0415		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	035	43		x
0420		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	036	32		x
0425		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	037	30		x
0435		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	038	43		x
0450		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	039	01		x
0460		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	040	01		x
0475		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	041	01		x
0480		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	042	01		x
0485		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	043	01		x
0490		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	044	01		x
0495		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	045	30		x

Chg	Position	S p	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column All	quantity
	0500		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	046	01		x	
	0505		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	047	01		x	
	0515		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	048	01		x	
	0525		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	049	01		x	
	0530		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	050	21		x	
	0535		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	051	01		x	
	0540		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	052	30		x	
	0545		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	053	30		x	
	0575		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	058	37		x	
	0585		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	059	01		x	
	0590		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	060	01		x	
	0595		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	061	37		x	
	0605		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	062	01		x	
	0610		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	063	01		x	
	0615		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	064	36		x	
	0620		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	065	36		x	
	0625		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	066	01		x	
	0630		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	067	01		x	
	0635		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	068	18		x	
	0640		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	069	32		x	
	0650		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	080	01		x	
	0660		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	081	01		x	
	0670		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	082	01		x	
	0675		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	083	01		x	
	0680		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	084	01		x	
	0685		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	085	01		x	
	0690		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	086	01		x	

Chg	Position	Sp	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column All quantity
	0695		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	087	01		x
	0700		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	088	01		x
	0710		CIRCUIT DIAGRAM	A4-		44173-0000	ELD	089	01		x
	0755		CIRCUIT DIAGRAM LINE SUMM	A4-		44173-0000	ELD	090	43		x
	0765		CIRCUIT DIAGRAM TERM.SUMM	A4-		44173-0000	ELD	091	43		x
	0780		CIRCUIT DIAGRAM GROUNDING	A4-		44173-0000	ELD	092	36		x
I	0790		ALTERATION MESSAGES	A4-		44173-0000	ELD	099	50		x
	0800		LIST OF PLC-BLOCKS	A4-		47745-0000	ELD	001	36		x
	0805		LIST OF PLC-ADRESSES	A4-		47745-0000	ELD	002	36		x
I	0810		VOLUME DOCUMENT	A4-		47745-0000	ELD	003	50		x
	0815		MACHINE OPERATIONS DIAGR.	A4-		47745-0000	ELD	004	43		x
	0820		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	005	01		x
	0825		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	006	02		x
	0830		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	007	01		x
	0835		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	008	01		x
	0840		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	009	01		x
	0845		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	010	28		x
	0850		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	011	01		x
	0855		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	012	01		x
	0860		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	013	22		x
	0865		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	014	01		x
	0870		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	017	01		x
	0875		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	018	18		x
	0880		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	019	01		x
	0885		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	020	01		x
	0890		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	021	30		x
	0895		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	022	01		x

Chg	Position	S p	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column All	quantity
	0900		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	023	36		x	
	0905		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	024	03		x	
	0910		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	025	01		x	
	0915		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	026	36		x	
	0920		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	027	01		x	
	0925		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	028	02		x	
	0930		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	029	02		x	
	0935		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	050	01		x	
	0940		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	051	18		x	
	0945		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	052	02		x	
	0950		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	053	02		x	
	0955		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	054	01		x	
	0960		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	055	01		x	
	0965		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	090	01		x	
	0970		PLC-PROGRAMME LIST	A4-		47745-0000	ELD	099	01		x	
	1000		MOUNTING DRAWING	A4-		52534-0000	ELD	005	36		x	
	1010		MOUNTING DRAWING	A4-		52534-0000	ELD	007	01		x	
	1020		MOUNTING DRAWING	A4-		52534-0000	ELD	009	36		x	
	1030		MOUNTING DRAWING	A4-		52534-0000	ELD	011	36		x	
	1040		MOUNTING DRAWING	A4-		52534-0000	ELD	013	30		x	
	1045		MOUNTING DRAWING	A4-		52534-0000	ELD	014	18		x	
	1050		MOUNTING DRAWING	A4-		52534-0000	ELD	015	18		x	
	1060		MOUNTING DRAWING	A4-		52534-0000	ELD	016	36		x	
	1070		MOUNTING DRAWING	A4-		52534-0000	ELD	017	36		x	
	1080		MOUNTING DRAWING	A4-		52534-0000	ELD	020	01		x	
	1090		MOUNTING DRAWING	A4-		52534-0000	ELD	022	01		x	
	1100		MOUNTING DRAWING	A4-		52534-0000	ELD	024	01		x	

Chg	Position	Sp	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All
	1110		MOUNTING DRAWING	A4-		52534-0000	ELD	026	01		x
	1120		MOUNTING DRAWING	A4-		52534-0000	ELD	028	30		x
	1140		MOUNTING DRAWING	A4-		52534-0000	ELD	030	21		x
	1900		CONNECTION DRAWING	A4-		61334-0000	ELD	005	01		x
	1905		CONNECTION DRAWING	A4-		61334-0000	ELD	006	18		x
	1910		CONNECTION DRAWING	A4-		61334-0000	ELD	007	18		x
	1915		CONNECTION DRAWING	A4-		61334-0000	ELD	008	18		x
	1920		CONNECTION DRAWING	A4-		61334-0000	ELD	009	18		x
	1925		CONNECTION DRAWING	A4-		61334-0000	ELD	010	18		x
I	1985		CONNECTION DRAWING	A4-		61334-0000	ELD	020	50		x
I	1990		CONNECTION DRAWING	A4-		61334-0000	ELD	021	50		x
I	1995		CONNECTION DRAWING	A4-		61334-0000	ELD	022	50		x
	2000		CONNECTION DRAWING	A4-		61334-0000	ELD	023	01		x
	2010		CONNECTION DRAWING	A4-		61334-0000	ELD	028	01		x
	2030		CONNECTION DRAWING	A4-		61334-0000	ELD	032	01		x
	2040		CONNECTION DRAWING	A4-		61334-0000	ELD	033	01		x
	2050		CONNECTION DRAWING	A4-		61334-0000	ELD	034	36		x
	2051		CONNECTION DRAWING	A4-		61334-0000	ELD	035	01		x
	2070		CONNECTION DRAWING	A4-		61334-0000	ELD	040	01		x
	2075		CONNECTION DRAWING	A4-		61334-0000	ELD	041	01		x
	2085		CONNECTION DRAWING	A4-		61334-0000	ELD	043	43		x
	2090		CONNECTION DRAWING	A4-		61334-0000	ELD	044	43		x
	2095		CONNECTION DRAWING	A4-		61334-0000	ELD	045	43		x
	2100		CONNECTION DRAWING	A4-		61334-0000	ELD	046	43		x
I	2120		CONNECTION DRAWING	A4-		61334-0000	ELD	049	50		x
	2150		CONNECTION DRAWING	A4-		61334-0000	ELD	053	43		x
	2155		CONNECTION DRAWING	A4-		61334-0000	ELD	054	30		x

Chg	Position	Sp	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All
	2160		CONNECTION DRAWING	A4-		61334-0000	ELD	055	43		x
	2170		CONNECTION DRAWING	A4-		61334-0000	ELD	057	43		x
	2185		CONNECTION DRAWING	A4-		61334-0000	ELD	058	01		x
	2190		CONNECTION DRAWING	A4-		61334-0000	ELD	059	01		x
I	2195		CONNECTION DRAWING	A4-		61334-0000	ELD	060	50		x
	2200		CONNECTION DRAWING	A4-		61334-0000	ELD	061	01		x
	2225		CONNECTION DRAWING	A4-		61334-0000	ELD	065	37		x
	2230		CONNECTION DRAWING	A4-		61334-0000	ELD	066	01		x
	2260		CONNECTION DRAWING	A4-		61334-0000	ELD	071	01		x
	2265		CONNECTION DRAWING	A4-		61334-0000	ELD	072	01		x
	2270		CONNECTION DRAWING	A4-		61334-0000	ELD	073	01		x
	2275		CONNECTION DRAWING	A4-		61334-0000	ELD	074	01		x
	2280		CONNECTION DRAWING	A4-		61334-0000	ELD	075	36		x
	2315		CONNECTION DRAWING	A4-		61334-0000	ELD	080	02		x
	2320		CONNECTION DRAWING	A4-		61334-0000	ELD	081	01		x
	2810		MAIN CONNECTION	A4-		61335-0000	ELD	005	36		x
	2815		MAIN CONNECTION	A4-		61335-0000	ELD	006	01		x
	4040		FUSE PANEL LABEL	A3-		1296409-0000	DRA	000	AC		x
	4045		FUSE PANEL LABEL	A3-		1296412-0000	DRA	000	AC		x
	4050		DOCUMENT FILE LABEL	A4-		573376-0000	DRA	000	AA		x
	4060		DOCUMENT INDEX	A4-		573377-0000	DRA	000	AA		x
	4100		DISTRIBUTION TERMINAL, 220V	A4-		573378-0000	DRA	000	AC		x
	4105		DISTRIBUTION TERMINAL, DIODES	A4-		575976-0000	DRA	000	AC		x
	4110		POWER & CONTR. TERM. X1:1	A4-		1143956-0000	DRA	000	AB		x
	4120		POWER TERMINAL X1:2	A4-		1143957-0000	DRA	000	AC		x
	4123		CONTROL TERMINAL X1:3	A4-		575810-0000	DRA	000	AC		x

Chg	Position	S p	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column quantity All
	4127		CONTROL TERMINAL X1:4			A4- 575811-0000	DRA	000	AB		x
	4128		TERMINAL BLOCK X006			A4-1143955-0000	DRA	000	AB		x
	4130		NEUTRAL TERMINAL X2-3			A4-1143964-0000	DRA	000	AB		x
	4140		TERMINAL BLOCK X10			A4- 927280-0000	DRA	000	AD		x

Information 'valid to' 1998.10.22

Chg	Position	S P	Description	A s	Si ze	Identity	DTp	Prt	Vs	Un it	Column quantity All
D	0005		ELECTRICAL DOCUMENT	A4-		67038-1000	BOM	000	AE		x
D	0790		ALTERATION MESSAGES	A4-		44173-0000	ELD	099	43		x
D	0810		VOLUME DOCUMENT	A4-		47745-0000	ELD	003	21		x
D	1985		CONNECTION DRAWING	A4-		61334-0000	ELD	020	01		x
D	1990		CONNECTION DRAWING	A4-		61334-0000	ELD	021	43		x
D	1995		CONNECTION DRAWING	A4-		61334-0000	ELD	022	43		x
D	2120		CONNECTION DRAWING	A4-		61334-0000	ELD	049	43		x
D	2195		CONNECTION DRAWING	A4-		61334-0000	ELD	060	43		x

GENERAL REMARKS: CABLES 101-171 BELONG TO FINAL FOLDER UNIT.
CABLES 250-251 BELONG TO VALVE PANEL.
CABLES 301-399 BELONG TO STAND.
CABLES 400-493 BELONG TO SUPERSTRUCTURE.
CABLES 501-559 BELONG TO STRIP APPLICATOR.
CABLES 701-765 BELONG TO AUTOMATIC SPLICING.
CABLES 150-153,155,156,170,171,278,328,353,364-367,369,370,381,390-394,
398,399, 460-469, 488, 489, 491, 492, 493, 504, 505, 551, 552, 554,
751-758, 761, 762 ARE SUPPLIED WITH THE COMPONENTS.
CABLES 169,170,171,338 AND 385 ARE INCLUDED AS EXTRA EQUIPMENT.
"M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMS. 67038 649171

ECN NUMBER:	EC 17829	EC 19666	EC 20127	EC 22843	EC 70684	EC 70775	EC 71023	EC 71182
DATE DISTRIBUTED	93-04-21	93-09-01	94-06-02	95-12-05	97-03-21	97-05-30	97-10-23	97-11-17

EC 71424
98-03-13

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0101	CABLE RADOX 155 1X16 MM2	351121-0200		-	MM	5000
0102	CABLE RADOX 155 1X16 MM2	351121-0200		-	MM	5000
0103	CABLE RADOX 155 1X35 MM2	351121-0201		-	MM	5000
0104	CABLE RADOX 155 1X35 MM2	351121-0201		-	MM	5000
0105	CABLE RADOX 155 1X16 MM2	351121-0200		-	MM	5800
0106	CABLE RADOX 155 1X16 MM2	351121-0200		-	MM	5800
0107	CABLE RADOX 155 1X35 MM2	351121-0201		-	MM	5800
0108	CABLE RADOX 155 1X35 MM2	351121-0201		-	MM	5800
0111	CABLE AWM BLACK 16MM2	351179-0109		-	MM	2100
0112	CABLE AWM BLACK 16MM2	351179-0109		-	MM	2100
0113	CABLE AWM BLACK 35,0MM2	351179-0111		-	MM	2100
0114	CABLE AWM BLACK 35,0MM2	351179-0111		-	MM	2100
0115	CABLE AWM BLACK 16MM2	351179-0109		-	MM	2100
0116	CABLE AWM BLACK 16MM2	351179-0109		-	MM	2100
0117	CABLE AWM BLACK 35,0MM2	351179-0111		-	MM	2100
0118	CABLE AWM BLACK 35,0MM2	351179-0111		-	MM	2100
0119	CABLE OLFLEX 4X2,5 MM2	351150-0418		-	MM	2700

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0120	CABLE OLFLEX 4X2,5 MM2	4- 90220-0105	-		MM	2700
I 0158	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	2700
0159	CABLE OLFLEX 4X0,75 MM2	351150-0404	-		MM	2600
I 0169	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	4000
	* EXTRA EQUIPMENT					
I 0250	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	4200
I 0251	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	4200
0303	CABLE OLFLEX 3X2,5 MM2	351150-0417	-		MM	5000
0309	CABLE OLFLEX 3X4 MM2	351150-0422	-		MM	5600
0310	CABLE OLFLEX 3X4 MM2	351150-0422	-		MM	5600
0318	CABLE OLFLEX 3X2,5 MM2	351150-0417	-		MM	3500
0319	CABLE OLFLEX 4X2,5 MM2	351150-0418	-		MM	4700
0320	CABLE OLFLEX 4X2,5 MM2	4- 90220-0105	-		MM	4900
0326	CABLE AWM YELL/GREEN 16,0	351175-0109	-		MM	4200
0330	CABLE OLFLEX 7X2,5 MM2	351150-0420	-		MM	4900
0331	CABLE OLFLEX 5X2,5 MM2	351150-0419	-		MM	4900
0332	CABLE OLFLEX 4X2,5 MM2	351150-0418	-		MM	3300
0333	CABLE OLFLEX 4X2,5 MM2	351150-0418	-		MM	4700
0334	CABLE OILFLEX 3X1,5 MM2	351150-0412	-		MM	3700
0336	CABLE OILFLEX 3X1,5 MM2	351150-0412	-		MM	2300
0337	CABLE OILFLEX 3X1,5 MM2	351150-0412	-		MM	4000
0338	CABLE OILFLEX 3X1,5 MM2	351150-0412	-		MM	1500
	* EXTRA EQUIPMENT					
I 0342	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	3000
0343	CABLE OLFLEX 4X0,75 MM2	351150-0404	-		MM	2500
0344	CABLE OLFLEX 3X2,5 MM2	351150-0417	-		MM	5000
0349	CABLE OLFLEX 4X2,5 MM2	351150-0418	-		MM	6500
0350	CABLE OLFLEX 7X0,75 MM2	351150-0406	-		MM	2800
0351	CABLE OLFLEX 12X0,75 MM2	351150-0407	-		MM	4500
0352	CABLE OLFLEX 12X0,75 MM2	351150-0407	-		MM	4500
0354	CABLE OLFLEX 12X0,75 MM2	351150-0407	-		MM	5000
I 0355	CABLE OLFLEX 41X0,75MM2	351150-0428	-		MM	4000
0356	CABLE OLFLEX 5X0,75 MM2	351150-0405	-		MM	4000
I 0357	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	5500
I 0360	CABLE OLFLEX 25X0,75 MM2	351150-0425	-		MM	4400

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
0371	CABLE 1X0,76 PAIR-TWISTED	4- 90220-0082	-		MM	7000
0372	THERMO-CABLE	90220-0034	-		MM	5000
0374	COAXIAL CABLE L=5000MM	4- 548770-0001	-		ST	1
0375	COAXIAL CABLE L=5000MM	4- 548770-0001	-		ST	1
I 0376	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	4300
I 0380	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	2700
0383	CABLE OLFLEX 5X0,75 MM2	351150-0405	-		MM	3500
0384	CABLE OLFLEX 4X0,75 MM2	351150-0404	-		MM	900
I 0385	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	1800
	* EXTRA EQUIPMENT					
0400	CABLE OLFLEX 5X1,5 MM2	4- 90220-0108	-		MM	4800
0401	CABLE SIHF 3G2,5	351120-0145	-		MM	4200
0402	CABLE SIHF 3G2,5	351120-0145	-		MM	3500
0409	CABLE OLFLEX 4X2,5 MM2	351150-0418	-		MM	3500
0410	CABLE RADOX 155 1X6.0MM2	351121-0216	-		MM	4100
0411	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0412	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0413	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0414	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0415	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0416	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	4100
0420	CABLE RADOX 155 1X6.0MM2	351121-0216	-		MM	1900
0421	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0422	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0423	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0424	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0425	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0426	CABLE RADOX 155 1X6.0MM2	351121-0207	-		MM	1900
0450	THERMO-CABLE	90220-0034	-		MM	4600
0451	THERMO-CABLE	90220-0034	-		MM	2900
0452	THERMO-CABLE	90220-0034	-		MM	3600
0453	THERMO-CABLE	90220-0034	-		MM	4100
0454	THERMO-CABLE	90220-0034	-		MM	4700
0455	THERMO-CABLE	90220-0034	-		MM	3000
I 0456	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	2600
I 0457	CABLE OLFLEX 3X0,75 MM2	351150-0403	-		MM	2500

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
I 0458	CABLE OLFLEX 3X0,75 MM2	351150-0403		-	MM	2400
I 0459	CABLE OLFLEX 3X0,75 MM2	351150-0403		-	MM	2600
0470	THERMO-CABLE	90220-0034		-	MM	4400
0476	CABLE SIHF 4X0,75MM2	351120-0162		-	MM	2200
0477	CABLE SIHF 2X0,75	351120-0122		-	MM	3000
0478	CABLE SIHF 2X0,75	351120-0122		-	MM	1600
I 0480	CABLE OLFLEX 34X0,75 MM2	351150-0427		-	MM	2200
0484	CABLE SIHF 2X0,75	351120-0122		-	MM	2200
0485	CABLE SIHF 2X0,75	351120-0122		-	MM	2200
0490	CABLE SIHF 2X0,75	351120-0122		-	MM	2000
0501	CABLE OLFLEX 4X2,5 MM2	351150-0418		-	MM	1000
0502	CABLE SIHF 3G2,5	351120-0145		-	MM	1000
0503	CABLE SIHF 3G2,5	351120-0145		-	MM	1000
0556	THERMO-CABLE	90220-0034		-	MM	500
0557	CABLE OLFLEX 7X0,75 MM2	351150-0406		-	MM	1500
0559	CABLE OLFLEX 4X0,75 MM2	351150-0404		-	MM	500
0701	CABLE OLFLEX 5X1,5 MM2	90220-0108	4-	-	MM	7000
0703	CABLE OLFLEX 3X2,5 MM2	351150-0417		-	MM	2500
0759	THERMO-CABLE	90220-0034		-	MM	3000
I 0760	CABLE OLFLEX 12X0,75 MM2	351150-0407		-	MM	3000
0763	CABLE OLFLEX 5X0,75 MM2	351150-0405		-	MM	4000
I 0764	CABLE OLFLEX 3X0,75 MM2	351150-0403		-	MM	4400
I 0765	CABLE OLFLEX 3X0,75 MM2	351150-0403		-	MM	2000

I GENERAL REMARKS: " M A S T E R D A T A B A S E I N R/3 "

USED IN ASSEMB. 67038 649171

ECN NUMBER:	EC 17829	EC 20127	EC 70775
DATE DISTRIBUTED	93-04-21	94-06-02	97-05-30

POS	PART TITLE / REMARKS	PART NUMBER	R	SP	UN	1001
I 0001	SIDE PANEL	C- 971444-010V	-			1
I S001	EMERGENCY STOP BUTTON	3- 90064-0124	S			1
S001:1	SIGN "EMERGENCY STOP" YL	4- 486826-0001	C			1
	* EMERGENCY STOP					
S002	PUSH BUTTON RED	3- 90064-0085	S			1
S002:1	SIGN "SHORT STOP"	359301-0110	C			1
S019	PUSH BUTTON GREEN	3- 90064-0083	S			1
S019:1	SIGN "DROP CHUTE"	359301-0050	C			1
	* PACKAGE EJECTOR					
X111	PLUG 24-POLE HARTING	3- 90110-0128	S			1
0150	SIGN"WHITE CARD EL.EQ."	3- 90194-0112	C			1
	REPLACED BY					ECN
	3- 90194-0133 SIGN "DELIVERED DESIGN"					19687
0160	SIGN "FLASH SIGN" 50X50MM	90194-0016	C			1

achine: 649171

CN 71424 'O'
9980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
A002	12:36	A107	51:01	A306	28:01	M.B041	45:30	M.B068:2	46:01
A003	12:36	A110	52:30	A401	06:18	M.B042	27:01	M.B070:1	40:01
A004	33:01	A110	53:30	A402	06:18	M.B043	45:30	M.B070:2	40:01
P.A004	33:01	P.A110	17:01	A403	06:18	M.B044	45:30	M.B070:3	40:01
A006	34:01	A114	58:37	A450	18:01	M.B045	43:01	M.B070:4	40:01
A012	37:30	A114	59:01	A451	18:01	M.B046	46:01	M.B071	47:01
A013	38:43	A115	60:01			M.B047	46:01	M.B077	51:01
P.A100	17:01	A115	61:37	M.B001	39:01	M.B048:1	47:01	M.B078	51:01
P.A100	80:01	A116	62:01	M.B002	43:01	M.B048:2	47:01	M.B080:1	33:01
P.A100	81:01	A116	63:01	M.B003	43:01	M.B048:3	47:01	M.B080:2	33:01
P.A100	82:01	A117	64:36	M.B006	43:01	M.B048:4	47:01	M.B082:1	34:01
P.A100	83:01	A117	65:36	M.B009	50:19	M.B049	44:01	M.B082:2	34:01
P.A100	84:01	A120	66:01	M.B010	40:01	M.B050	19:18	M.B083	28:01
P.A100	85:01	A120	67:01	M.B011	40:01	M.B051	46:01	M.B085	47:01
P.A100	86:01	A121	68:18	M.B012	40:01	M.B052	52:30	M.B090:1	45:30
P.A100	87:01	A121	69:32	M.B016	40:01	M.B053	46:01	M.B090:2	45:30
P.A100	88:01	A201	19:18	M.B017	40:01	M.B054	28:01	M.B098	35:43
P.A100	89:01	A202	19:18	M.B018	47:01	M.B055	22:37	M.B099:1	47:01
A101	39:01	A203	20:37	M.B019	40:01	M.B056	45:30	M.B099:2	47:01
A102	40:01	A204	20:37	M.B020	45:30	M.B058	45:30	M.B102	22:37
A102	41:01	A205	21:18	M.B030	44:01	M.B059	27:01	M.B103	46:01
A103	42:01	A206	21:18	M.B032	51:01	M.B061	25:37	M.B104	46:01
A103	43:01	A207	22:37	M.B033	51:01	M.B062	50:19	M.B115	46:01
A104	44:01	A208	22:37	M.B034	27:01	M.B063:1	50:19		
A104	45:30	A213	25:37	M.B035	51:01	M.B063:2	50:19	M.C002	10:18
A105	46:01	A301	27:01	M.B036	21:18	M.B064	50:19		
A105	47:01	A302	27:01	M.B037	21:18	M.B066:1	50:19	D108	17:01
A106	48:01	A303	27:01	M.B038	20:37	M.B066:2	50:19		
A106	49:01	A304	28:01	M.B039	20:37	M.B067	50:19	E001	10:18
A107	50:19	A305	28:01	M.B040	19:18	M.B068:1	46:01	M.E001	10:18

achine: 649171

CN 71424 'O'
9980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
E002	10:18	M.F45	09:36	K015	60:01	K205	07:01	P004	35:43
M.E002	10:18	M.F46	09:36	K016	62:01	K206	07:01	P005	63:01
M.E003	10:18			K017	62:01	K209	07:01	P006	63:01
		G001	13:18	K018	60:01	K210	07:01		
F001A	07:01	G100	17:01	K019	61:37	K211	08:18	Q001	14:18
F001B	07:01			K020	35:43			Q001:1	40:01
F001C	07:01	P.H002S	84:01	K022	60:01	L001	10:18	Q002	14:18
F002A	07:01	P.H009S	84:01	K023	35:43	M.L001	06:18	Q002:1	40:01
F002B	07:01	M.H015S	63:01	K030	38:43	M.L002	06:18	Q003	09:36
F002C	07:01	M.H016S	63:01	K050	32:30	M.L003	06:18	Q009	11:18
F003A	06:18	M.H017S	63:01	K051	32:30	M.L061	10:18	Q009:1	40:01
F003B	06:18	P.H030S	84:01	K101	35:43	M.L062	10:18	Q010	11:18
F003C	06:18	M.H031	36:32	K102	35:43	M.L063	10:18	Q010:1	40:01
F004A	06:18	P.H031S	84:01	K104	58:37			Q010:2	59:01
F004B	06:18	P.H032S	84:01	K105	64:36	M.M001	14:18	Q011	11:18
F004C	06:18	P.H033S	84:01	K106	64:36	M.M001:1	14:18	Q011:1	40:01
F005	08:18			K108	64:36	M.M002	10:18	Q012	15:18
F006	08:18	K001	58:37	K109	64:36	M.M004	15:18	Q012:1	40:01
F008	08:18	K002	58:37	K110	64:36	M.M005	11:18	Q013	13:18
F020	09:36	K004	58:37	K111	64:36	M.M006	11:18	Q013:1	40:01
F022	12:36	K005	60:01	K112	60:01	M.M007	11:18	Q013:2	35:43
F023	08:18	K006	58:37	K113	36:32	M.M010	11:18	Q014	11:18
F025	10:18	K007	58:37	K121	65:36	M.M011	13:18	Q014:1	40:01
F026	09:36	K008	35:43	K125	65:36	M.M013	13:18	Q030	13:18
F027	13:18	K009	59:01	K126	65:36	M.M014	12:36	Q030:1	40:01
F028	12:36	K010	59:01	K127	65:36	M.M032	12:36	Q101	05:30
F029	09:36	K011	59:01	K128	36:32	M.M101	11:18	Q102	05:30
F050	36:32	K012	58:37	K202	36:32				
M.F40	09:36	K013	35:43	K203	08:18	P002	29:36	M.R001	08:18
M.F41	09:36	K014	58:37	K204	08:18	P003	50:19	R003	06:18

achine: 649171

CN 71424 'O'
9980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
R004	06:18	P.S009H	80:01	W002	19:18	M.X072	06:18	M.Y038	67:01
R005	06:18	P.S012	80:01	W003	20:37	M.X073	06:18	M.Y044	66:01
M.R005:1	09:36	M.S014	43:01	W004	20:37			M.Y045	67:01
M.R005:2	09:36	S015	36:32	W005	21:18	M.Y001	67:01	M.Y046	67:01
M.R005:3	09:36	M.S015H	63:01	W006	21:18	M.Y002	67:01	M.Y047	66:01
M.R007:1	09:36	M.S016H	63:01	W007	22:37	M.Y005	68:18	M.Y054	67:01
M.R007:2	09:36	M.S017H	63:01	W008	22:37	M.Y006	66:01	M.Y069	58:37
M.R007:3	09:36	M.S019	40:01	W009	25:37	M.Y007	66:01	M.Y070	69:32
M.R031	08:18	P.S019	81:01	W010	29:36	M.Y008	66:01	M.Y071	68:18
M.R032	07:01	P.S020	81:01	W011	29:36	M.Y009	66:01	M.Y078	33:01
M.R035	08:18	M.S029	37:30	W012	29:36	M.Y010	66:01	M.Y086	68:18
M.R036	07:01	P.S030H	80:01	W014	63:01	M.Y012	33:01	M.Y090	69:32
M.R037	08:18	P.S031H	80:01	W015	06:18	M.Y013	33:01	M.Y091	69:32
M.R038	08:18	M.S032	37:30	W016	13:18	M.Y014	33:01	M.Y102	59:01
P.R100	17:01	P.S032H	81:01	W017	13:18	M.Y017	68:18		
R108	17:01	P.S033H	80:01	W018	19:18	M.Y018	68:18	Z100	05:30
R202	36:32	M.S034	51:01	W019	19:18	M.Y020	59:01	Z101	05:30
		M.S060	50:19	W020	20:37	M.Y021	59:01	Z102	05:30
M.S001	37:30	M.S061	40:01	W021	20:37	M.Y023	66:01		
P.S001	37:30	M.S065	51:01	W022	21:18	M.Y024	59:01		
M.S002	40:01	M.S066	51:01	W023	21:18	M.Y026	59:01		
P.S002H	80:01			W024	22:37	M.Y027	58:37		
S003	40:01	T001	09:36	W025	22:37	M.Y028	68:18		
M.S003	37:30	M.T002	09:36	W026	25:37	M.Y029	68:18		
S004	42:01	T003	08:18	W027	12:36	M.Y032	36:32		
S005	42:01	M.T004	09:36	W028	12:36	M.Y033	69:32		
M.S005	10:18					M.Y034	69:32		
S006	42:01	V001	09:36	X004	10:18	M.Y035	69:32		
S007	41:01			M.X027	39:01	M.Y036	69:32		
P.S007	80:01	W001	19:18	M.X071	06:18	M.Y037	67:01		

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RUNG	REFERENCE INSTRUCTION	ADDRESS	VOLUME												
			1000 cc	①1055 cc	1000 Sq.	1000 cc SLIM	1000 cc HIGH FIN	750 cc	750 cc SLIM	500 cc Sq.	500 cc SLIM	500 cc	400cc	375cc	355 cc
509	S00	S00.05	115-124		130-140	130-140	115-124	70-104	115-124	130-140	70-104	130-140	60- 74	130-140	115-124
	M02.04		315-324		330-340	330-340	315-324	270-304	315-324	330-340	270-304	330-340	260-274	330-340	315-324
621	S00	S00.07	47- 66		127-146	137-156	57- 76	105-125	47 - 66	110-130	105-125	105-125	367- 6	156-176	62-102
	PUT R000		247-266		327-346	337-356	257-276	305-325	247-266	310-330	305-325	305-325	167-206	356-376	262-302
621	S00	S00.08	67-106		147-166	157-176	77-116	126-146	67 -106	130-150	126-146	126-146	7- 26	177-217	103-123
	PUT R000		267-306		347-366	357-376	277-316	326-346	267-306	330-350	326-346	326-346	207-226	377- 17	303-323
621	S00	S00.10	107-126		167-206	177-216	117-136	147-167	107-126	150-170	147-167	147-167	27 - 46	20 - 40	124-144
	PUT R000		307-326		367- 6	377- 16	317-336	347-367	307-326	350-370	347-367	347-367	227-246	220-240	324-344
621	S00	S00.11	127-146		7- 26	217-236	137-156	170-210	127-146	170-210	170-210	170-210	47 - 66	41 - 61	145-165
	PUT R000		327-346		207-226	17- 36	337-356	370- 10	327-346	370- 10	370- 10	370- 10	247-246	241-261	345-365
625	CTU C08	C008.0	28- 30		20- 22	22- 24	26- 28	32-34	28-30	42-44	32-34	42-44	38-40	34-36	42-44
1303	TRN T04	T004.1	4S0-5S5		4S0-5S5	4S0-5S5	4S0-5S5	4S0-5S5	4S0-5S5	4S0-5S5	4S0-5S5	4S0-6S5	4S0-6S5	4S0-6S5	4S0-6S5
1314	TRN T04	T004.2	3S0-5S5		3S0-5S5	3S0-5S5	3S0-5S5	3S0-5S5	3S0-5S5	3S0-5S5	3S0-5S5	3S0-6S5	3S0-6S5	3S0-6S5	3S0-6S5
1306	TRN T04	T004.0	5S5-5S7		5S5-5S7	5S5-5S7	5S5-5S7	5S5-5S7	5S5-5S7	5S5-5S7	5S5-5S7	6S5-6S7	6S5-6S7	6S5-6S7	6S5-6S7
1416	CTU C09	C009.0	104-105		96-97	104-105	104-105	104-105	104-105	104-105	104-105	104-105	104-105	104-105	104-105
1822	M37.14	GET	K2450		K2850	K02700	K2550	K2100	K2450	K1867	K2100	K1667	K1800	K1967	K1667
	PUT R112														
1822	M37.14	GTH	K0016		K0043	K00036	K0029	K0128	K0016	K0040	K0012	K0036	K0060	K0050	K0010
	PTH R113														
1902	M02.11	AND	KFE7FH		KFE7FH	KFE7FH	KFE7FH	KFCFFH	KFE7FH	KF9FFH	KFCFFH	KF3FFH	KF3FFH	KF9FFH	KF3FFH
	PUT R10														
1903	M02.11	AND	K00FFH		K001FH	K003FH	K007FH	K0FFFH	K00FFH	KFFFFH	K0FFFH	KFFFFH	KFFFFH	K3FFFH	KFFFFH
	PUT R11														
1904	M02.11	AND	KFCC0H		KFFF2H	KFFCCH	KFF20H	K3C00H	KFCC0H	KF003H	K3C00H	K000FH	K0003H	KC000H	K000FH
	PUT R12														
1905	M02.11	AND	KFFFFH		KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFCFH	KFFFFH	KF3C0H	KFF9FH	KFFF9H	KF3C0H
	PUT R13														
1906	M11.11	AND	KFFF8H		KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H	KFFF8H
	PUT R10														
1907	C0001.1	AND	KFFFBH		KFFFBH	KFFFBH	KFFFBH	KFFFBH	KFFFBH	KFFFBH	KFFFBH	KFFFDH	KFFFBH	KFFFDH	KFFFBH
	PUT R10														

Note	A				① NOT EVALUATED VOLUME
ECN No.	71972				
Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class -	
Machine TBA/8-1000	Denomination VOLUME ADAPTION DOCUMENT				
Company Tetra Brik R.& D. S.p.A.	Drawing No 47745-03:50	Page 1/2			

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RUNG	REFERENCE INSTRUCTION	ADDRESS	VOLUME												
			1000 cc	①1055 cc	1000 Sq.	1000 cc SLIM	1000 cc HIGH FIN	750 cc	750 cc SLIM	500 cc Sq.	500 cc SLIM	500 cc	400cc	375cc	355 cc
1908	M00.06 PUT R10	AND	KFFF7H		KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H	KFFF7H
1909	M02.14 PUT R11	AND	KFFFFH		K7FFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH
1910	M02.14 PUT R12	AND	KFE1FH		KFFF8H	KFFC3H	KFF0FH	K87FFH	KFE1FH	KFFFFH	K87FFH	KFFFFH	KFFFFH	K3FFFH	KFFFFH
1911	M02.14 PUT R13	AND	KFFFFH		KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFF0H	KFFFFH	KFC3FH	KFFC3H	KFFFCH	KFC3FH
1912	M02.15 PUT R12	AND	KFF1FH		KFFF8H	KFFE3H	KFF8FH	KC7FFH	KFF1FH	KFFFFH	KC7FFH	KFFFFH	KFFFFH	K3FFFH	KFFFFH
1913	M02.15 PUT R13	AND	KFFFFH		KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFF1H	KFFFFH	KFC7FH	KFFE3H	KFFFEH	KFC7FH
1916	M02.10 PUT R11	GET	K0000H		K0000H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H
1917	M02.10 PUT R12	GET	KFC00H		KFFF0H	KFFC0H	KFF00H	K0000H	KFC00H	K0000H	K0000H	K0000H	K0000H	K0000H	K0000H
1918	M02.10 PUT R13	GET	KFFFFH		KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFFFH	KFFF8H	KFFFFH	K8000H	KFE00H	KFFF8H	K8000H
2112	D106	DON	0S500		0S600	0S500	0S500	0S500	0S500	0S500	0S500	0S500	0S500	0S500	0S500

Note	A			
ECN No.	71972			
Sign./Date	DBI/981021			
Appr./Date	PGI/981021			

① NOT EVALUATED VOLUME

Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI Date 981021 Approved PGI Date 981021 Doc. class –

Machine: TBA/8-1000

Denomination: VOLUME ADAPTION DOCUMENT

Drawing No: 47745-03:50

Page 2/2

TBA/8-100V 1000 CC
47745-0036 ECN 71023

970901 DBI
970314 FRM
970123 DBI
960419 PGI
960314 PGI

Type: 64.1
Size: 12054
Blocks: 31
Rungs: 562
Addresses: 737

I/O Map:

```
                RACK    0         1         2         3         4         5         6         7
            +---+---+--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+
            !   !   !  !I4!  !I0!O4!  !O0!  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !
            ! P !   +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+
            ! O ! C !E1!I5!  !  !O5!  !O1!  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !
            ! W !   +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+
            ! E ! U !I2!I6!  !O2!O6!  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !
            ! R !   +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+
            !   !   !I3!I7!  !  !O7!  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !  !
            +---+---+--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+  +--+--+
```

Fast I/O: Block90
Block99 O16 I04 E01

Scan time: Block05-89: 10
Block90-98: 2
Block99: 1

Sector: 0 = E01 1 = E01 2 = 3 = 4 = 5 = 6 = 7 =

LIST OF ADDRESSES

Address	Position	Function			used in rungs
C000		Printed design photocells		out of function	*1809, *1810
C001		Printed design in		wrong position	*1813, *1814
C002		Sequencer filling of		cleaningtray	*2410, *2413
C003		Sequencer external		cleaning	*2408, *2419
C004		Max runtime with low		level in peroxide tank	*1241, *1242
C005		Sequencer for spraying			*0903, *0904
C007		Sequencer for drying			*1002, *1003
C008		Sequencer delay of		filling on	*1409, *1410
C009		Package counter machine		speed	*1414, *1419
C012		Delay preheating ready			*0714, *0715
C015		Sequencer for transfering		data to design contr.sys.	*1816, *1817
C016		Delay on display		temperature	*0727, *0728
CO000.0	9- 10	Des.photoc.	filling on		1811
CO000.1	5- 6	Des.photoc.	production		1811
CO001.0	10- 11	Design in	wrong pos.		0619, 1813, 5310, 5512
CO001.1	2- 10	Design dev.	too large		1907
CO002.1	0- 10	Drainvalve	cleantray		2416
CO003.0	720- 730	Sequencer	cleaning		2402, 2420, 2909
CO003.1	1- 90	First	water rinse		2409, 2426
CO003.2	141- 350	Cleaning	period		2409, 2415, 2417
CO003.3	411- 500	Second	water rinse		2409
CO003.4	551- 640	Third	water rinse		2409
CO003.5	640- 644	Lubrication	after clean		0515
CO004.0	900- 910	Low level	tank perox.		1211, 1216, 1238, 1240, 1241, 2002, 5318
CO004.1	1- 905	Low level	tank perox.		1241
CO005.0	120- 122	Spraying	finished		0903, 0908, 0914
CO005.1	20- 120	Air inlet	valve over		0909, 2203
CO005.3	60- 120	Spray fault	upper limit		0910
CO005.4	24- 120	Start	spraying		0614, 0907, 0908, 1008, 2307, 5215
CO005.5	19- 45	Spray fault	upfilling		0909, 0910, 1008, 5215
CO007.0	1500- 1510	Drying time	finished		1002, 1005
CO007.1	1200- 1260	Bend.roller	drying		2203
CO007.2	0- 1200	B-valve	closed		1004, 5207
CO007.3	600- 1510	Start pre-	heating II		1012

LIST OF ADDRESSES

Address	Position	Function			used in rungs
CO008.0	28- 30	Delay	filling on		0625, 1409
CO009.0	104- 105	End package	counter		1416, 1417
CO012.0	300- 310	Preheating	finished		0714, 0717
CO015.0	33- 43	Delay after	transfering		1817, 1828
CO015.1	1- 32	Bits to	transfer		1819, 1821, 1823, 1824, 1825, 1826, 1827
CO016.0	960- 965	Delay disp.	16 minutes		0728, 5204, 5317
CO016.1	600- 965	Delay disp.	10 minutes		5111, 5217, 5306
CO016.2	8- 965	Delay disp.	8 seconds		1238, 2315, 5111, 5210
CO016.3	4- 965	Delay disp.	4 seconds		2907, 5406, 5407
CV002		Fill time	clean tray		2411, 2423, 2424
CV003		Cleaning	time value		0639, 0640, 0641, 0642, 0643, 0718, 0719
CV007		Sequenser	drying		0639, 0640, 0641, 0642, 0643
CV012		Preheating	time value		0639, 0640, 0641, 0642, 0643
CV016		Delay on display	temper.	value stored	0729, *0729
D004	3s0	Air blowing	infeed FFU		2150
D005	10s0	Mains	interrupt		2706
D007	0s70	Rotation	monitor		1322
D008	0s70	Rotation	monitor		1322
D009	2s0	Manual	splice on		1311
D010	4s0	Filling	clean tray		2411
D011	1m30s	FM still	sterile		2302
D012	10s0	Stop motor	FFU		2117
D013	5s00	Position	of B-valve		1007
D014	2m00s	Paper	supply ok		1319
D015	0s8	Conveyor	infeed FFU		2107
D016	2m00s	Stop ext.	conveyor		2152
D017	8s00	Stop main	motor		1402
D018	0s3	Rotation	mon. FFU		2104
D019	0s70	Rotation	mon. FFU		2104
D020	40s0	Alarm	lubrication		2509
D021	8s0	Alarm	lubrication		2509
D022	10s	Alarm water	pressure		2702
D023	10s0	Power IH	TS off		1704

LIST OF ADDRESSES

Address	Position	Function		used in rungs
D024	2s00	Signal	paper ended	1302
D025	0s30	Overload	in FFU	2110
D026	0s40	Overload	in FFU	2110
D027	4s0	Jump from	pos.3 to 0	0606
D028	1m00s0	Peroxide	pump on	1217
D029	10s0	Mechanical	brake	1404
D030	1h00m00s	Max.runtime	lubr.fault	2703
D031	59s0	Oilpressure	FFU	2151
D032	0s33	Synchron.	drop chute	2141
D033	5m00s	Air flap-	element off	1011
D034	2s5	Power off	FFU	2118
D036	10s0	Alarm water	press. bath	0711
D037	0s5	LS/SA	element off	1223
D038	5m00s0	SA fan	off	0707
D040	5s0	C-valve	on	1407
D041	1s00	Malfunction	outfeed FFU	2112
D042	15s00	Sensorcheck	perox. bath	1212
D043	1s0	S-G roller/	airknife	1221
D044	5m00s	Ster.param.	P2-recorder	2602
D045	5m00s	Oper.param.	P2-recorder	2605
D046	20s0	Alarm tank	peroxide	1240
D049	1m00s0	Filling	peroxide	1237
D050	15s00	Temperature	LS/SA	0716
D051	3s0	Level check	peroxide	1213
D052	2m00s0	Preparing	splice ASU	1326
D053	5s0	Check air	pressure	0610
D054	4s5	Check air	pressure	0610
D055	5s0	Delay steam	valve off	1406
D056	0s5	Delay low	level tank	1246
D057	2s0	Low level	perox.tank	1249
D058	25s0	Check low	level tank	1249
D059	0s5	Alarm reset	pulse time	1248
D060	0s5	Delay air	pressure	0610
D065	0s300	Right r.fin	activated	2153

LIST OF ADDRESSES

Address	Position	Function			used in rungs
D066	0s300	Left r.fin	activated		2153
D069	30s0	Batch	P2-recorder		2602
D092	10s0	Delay steam	alarm		2315
D093	1s0	Ext.package	supervision		2114
D094	0s250	Delay start	short stop		2203
D095	0s250	Delay stop	short stop		2203
D096	2s00	Delay paper	for splicer		5106
D097	4s0	Sterileair	inlet wrong		0913
D098	30s0	Delay after	power fail.		0606
D099	1m00s00	Delay reset	to pos. 0		2906
D100	0s500	Delay power	failure		2909
D101	0s400	Alarm reset	pulse		0522
D102	3s5	Delay for	redundancy		0624
D103	2s0	Delay stop	motor FFU		2117
D104	3s5	Delay on	ext.clean.		2405
D105	20s0	Delay check	level tray		2426
D106	0s500	Malfunction	outfeed FFU		2112
DV034	0s500	Power off Final Folder		Unit	*2118
E01.06		Bit angle-	encoder		2419
I02.00	A012	Emergency	stops		0702, 0707, 1205, 2909
I02.01	M.B010-019	Safety	monitors		1206, 2102
I02.02	M.B016	Jaw system	overload		1207, 1711
I02.03	Q001-Q013	Overload	protections		1208
I02.04	M.B070:1-4	Door guards	tower		0625, 0626, 0636, 1209, 1711, 2303, 2311, 2909
I02.05	M.B098	Upper door	guard ASU		1210
I02.06	M.S019	Package	ejector		2140
I02.07	S003-M.S061	Short	stop		0505, 0627, 2005
I02.10	A401-A402	Fault in	IH-unit,TS		1703, 5311
I02.11	A401-A402	Temperature	IH-unit,TS		1703, 5009
I02.12	A450	SA SS elem.	broken		2907, 5406
I02.13	A451	LS SS elem.	broken		2907, 5407

LIST OF ADDRESSES

Address	Position	Function		used in rungs
I02.14	S007	Zone heater	on	1709
I02.15	A403	Fault in	IH-unit,ZH	1708
I02.16	k128	Prepatation	switch	0609, 0627, 1317, 2904, 5504
I02.17	K030	Redundancy	on	0623, 0624, 1804
I03.00	S006.2	Fillentran.	selector	0621
I03.01	S006.2	Fillentran.	selector	0621
I03.02	Z101	Surge volt.	supervision	5503
I03.03	X1.353	Valve clean	on ext.sign	2605
I03.04	X1.377	Product at	machine	0625, 1103, 2804, 5211
I03.05	X1.362	Clean.thr.	prod.valve	1004, 1411, 2317
I03.06	S004	Cleaning of	steam barr.	2318
I03.07	S005	Service	switch	0604, 0605, 0613, 0618, 0639, 0640, 0641, 0642, 0643, 0909, 0914, 1004, 1005, 1012, 2004, 2302, 2305, 2307, 2602, 2903, 2907, 5011, 5204, 5317
I03.10	M.S014	Manual	lubrication	0515
I03.11	M.B002	Main air	pressure	0609, 0610, 1004
I03.12	M.B003	Water	pressure	0625, 2303, 2702
I03.14	M.B006	Lubrication	oilpressure	2509, 2510
I03.15	M.B045	Hydraulunit	temperature	0718, 2406, 2802, 5014
I03.16	M.B045	Hydraulunit	high level	0721, 2004
I03.17	M.B045	Hydraulunit	low level	0720, 0722, 2004, 5015
I04.00	M.B049	Cleaningcup	in position	0628, 0726, 2314, 5309
I04.01	M.B030	Lubric.oil	high level	2511
I04.02	M.B030	Lubric.oil	low level	0515, 2703, 5013
I04.03	A004	DCS request	volume val.	1820
I04.04	A004	Pulse des.	photocell	0508
I04.05	A004	Design	OK	1805, 1807, 1813, 1814
I04.06	A305	High level	tank perox.	1236, 1243, 1244, 1246, 1247
I04.07	A301	Clean.tray	level	2411, 2423, 2424, 2426
I04.10	M.B043	Outfeed FFU	congestion	2112, 2148
I04.11	M.B041	Stop pos.	FFU	0510, 2132, 9909

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Address	Position	Function		used in rungs
I04.12	M.B044	Infeed FFU	right cong.	2106, 2144, 2153
I04.13	M.B020	FFU	overload	0519
I04.14	M.B090:1-2	Ext.package	supervision	2114
I04.15	M.B058	Infeed conv	congestion	2107
I04.16	A306	Low level	perox. tank	1236, 1243, 1244
I04.17	M.B056	Oilpressure	FFU	2151
I05.00	M.B046	Squeeze	rollers pos	1227, 2604
I05.01	M.B047	Airknives	position	1228, 2604
I05.02	M.B051	Productpipe	position	0726, 1408, 2314, 2902, 5212
I05.03	M.B053	B-valve	position	0908, 1007, 1008, 1411
I05.04	M.B068:1	Clean.pipe1	in position	0726, 2314, 5216
I05.05	M.B068:2	Clean.pipe2	in position	0726, 2314, 5213
I05.06	M.B103	Ster. air	pipe jetdiv	0726, 2314, 5409
I05.07	M.B104	Ster. air	pipe B-val.	0726, 2314, 5410
I05.10	M.B085	Water pres.	perox. bath	0710, 0711
I05.11	M.B018	Sterileair	pressure	0609, 0613, 0625, 0706, 0723, 5307
I05.12	M.B071	Presteril.	valve pos.	0912, 0913, 1004
I05.13	M.B048:1-4	Bottomcover	perox.bath	1218, 2904, 5115
I05.14	M.B099:1-2	Monitors	doors ASU	1307, 1308, 1313, 1317, 1326, 5305
I05.15	A302	Peroxide	spray level	0905, 0906, 0910, 5215
I05.16	A303	Peroxide	bath level	1213, 1215, 1219
I05.17	A304	Separator	level	0703, 0704, 2303
I06.00	A201	Presteril.	air temp.	0625, 5304
I06.01	A202	Steam low	temperature	0625, 2315, 2604, 2906, 5210
I06.02	A203	Perox.bath	temperature	2002, 2603, 5204
I06.03	A204	Sterileair	temperature	0625, 2902, 5306
I06.04	A205	SA-element	temperature	0628, 0714, 0716, 0717, 5111
I06.05	A206	LS-element	temperature	0714, 0716, 0717, 5217
I06.06	A207	Airknifes	temperature	2002, 2604, 5207
I06.07	A208	Splicer ASU	temperature	1307, 1308, 5317
I06.15	A213	Peroxide	bath temp.	1230

LIST OF ADDRESSES

Address	Position	Function			used in rungs
I07.00	P003	Downcounter	papersupply		1305, 5105
I07.01	M.B062	Creasewheel	position		0516, 1310, 1413
I07.02	M.B063:1-2	Paper for	splicer		1307, 1308, 5106
I07.03	M.B064	Lower	slacksupply		1316, 1317, 1325
I07.04	M.S060	Manual	splicing		1308, 1311, 5317
I07.05	M.B067	Upper	slacksupply		1324
I07.06	M.B009	Rotation	monitor		0512
I07.07	M.B066:1-2	Paper	supply		1302, 5105
I07.10	M.B077	Cover in	place ASU		1307, 5104
I07.11	M.B078	Paper bobin	empty		1305
I07.12	M.S065	Splice	selector		1304, 1305, 1307, 1311, 5104, 5105
I07.13	M.S066	Web	feeding		1317
I07.14	M.S034	Strip	splice		0517
I07.15	M.B035	Paper	splice		0518
I07.16	M.B032	Strip	supply		5109
I07.17	M.B033	Strip	break		0625, 2002, 5110
I10.00	M.B052	Infeed FFU	left cong.		2106, 2144, 2153
M00.00		Machineladder	in	position 0	0515, 0613, 0622, 0623, 0625, *0629, 0633, 0636, 0638, 0644, 0661, 0662, 0702, 0705, 0706, 0708, 0712, 0719, 0723, 0725, 0727, 0728, 0911, 0914, 1012, 1220, 1222, 1231, 1306, 1309, 1317, 1413, 2118, 2302, 2407, 2509, 2908, 5307
M00.01		Machineladder	in	position 1	0605, 0606, 0615, 0618, 0625, 0628, *0629, 0632, 0639, 0640, 0641, 0642, 0643, 0644, 0645, 0646, 0650, 0802, 0913, 1222, 1302, 1308, 1402, 2117, 2406, 5111
M00.02		Machineladder	in	position 2	0613, 0616, 0625, *0629, 0647, 0648, 0905, 0911
M00.03		Machineladder	in	position 3	0606, 0614, 0618, 0625, 0628, *0629, 0639, 0640, 0641, 0642, 0643, 0648, 0649, 0650, 1004, 2307

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Address	Position	Function		used in rungs
M00.04		Machineladder in	position 4	0616, 0620, 0625, 0628, *0630, 0650, 0651, 1820
M00.05		Machineladder in	position 5	0602, 0616, 0618, 0621, 0625, *0630, 0635, 0654, 1202, 1235, 2804
M00.06		Machineladder in	position 6	0513, 0520, 0603, 0608, 0620, 0625, *0630, 0653, 0654, 0655, 1105, 1106, 1202, 1235, 1411, 1412, 1415, 1416, 1705, 1802, 1803, 1805, 1806, 1813, 1907, 1908, 2006, 2117, 2130, 2140, 2150, 2804
M00.07		Machineladder in	position 7	0606, 0616, 0626, 0628, *0630, 0652, 0658, 0661, 0662, 0712, 0723, 0726, 0907, 1008, 1012, 1102, 1202, 1216, 1221, 1302, 1308, 1402, 1810, 2302, 2407, 2408, 2903
M00.11		Machineladder in	position 2-7	*0631, 1234, 5304
M00.12		Machineladder in	position 3-7	0508, 0513, 0514, *0631, 0718, 0902, 0903, 0908, 0909, 0911, 0912, 1005, 1216, 1218, 1219, 1221, 1233, 1234, 1241, 1402, 1908, 2903, 2906, 2909, 5304
M00.13		Machineladder in	position 4-7	0511, 0616, 0617, *0631, 0652, 1008, 1102, 1202, 2604
M00.14		Machineladder in	position 5-7	*0631, 1202, 1232, 1235, 1709, 1810, 2140, 2906
M00.15		Machineladder in	position 6-7	*0631
M01.00		Step up conditions in	machine ladder	*0625, 0627
M01.01		Step up conditions in	machine ladder	0515, 0613, 0616, 0618, 0621, 0622, *0626, 0627, *0627, 0628, 0635, 0636, 0646, 0648, 0702, 0802, 1202, 1820, 2407
M01.02		Inching condition		*0628, 0632, 0712, 1315, 1402, 2406, 2408
M02.00		Output for pulse	step up	*0505, 0511, 0513, 0515, 0608, 0616, 0618, 0802, 1820, 2404, 2407
M02.01		Output for pulse	step down	*0506, 0606, 0613, 0616, 0618, 0802, 2303
M02.02		Output for pulse	brake	*0507, 2006

Address	Position	Function			used in rungs
M02.03		Output for pulse		printed design	*0508, 0621, 1810
M02.04		Output for pulse		activation packagedumping	*0509, 0513, 0615, 0620, 0622, 1409, 1805, 1809, 1813, 1907, 1908, 1914, 1915, 1919, 1920
M02.05		Output for pulse		FFU	*0510, 2104, 2106, 2123, 2125, 2130, 2131, 2141, 2153
M02.06		Output for pulse		startsequence	*0511, 1202, 1211, 1217
M02.07		Output for pulse		rotation monitor	*0512, 1322, 1323
M02.10		Output for pulse		tubesealing	*0513, 1916, 1917, 1918, 1921
M02.11		Output for pulse		stop	*0514, 1211, 1217, 1902, 1903, 1904, 1905
M02.12		Output for pulse		start long lubrication	*0515, 2421, 2502, 2504, 2506
M02.13		Output for pulse		position ASU	*0516, 1311
M02.14		Output for pulse		PE-strip splice	*0517, 1909, 1910, 1911
M02.15		Output for pulse		web splice	*0518, 1912, 1913
M02.16		Output for pulse		overload FFU	*0519, 2110
M02.17		Output for pulse		inching main motor	*0520, 1211, 1217
M03.00		Pulse	step up		0505
M03.01		Pulse	step down		0506
M03.02		Pulse	start brake		0507
M03.03		Pulse	print des.		0508
M03.04		Pulse	shiftreg.		0509
M03.05		Pulse	pos.FFU		0510
M03.07		Pulse	rot.monitor		0512
M03.10		Pulse	tubesealing		0513
M03.11		Pulse	short stop		0514
M03.12		Pulse	long lubric		0515
M03.13		Pulse	pos.ASU		0516
M03.14		Pulse	PE-splice		0517
M03.15		Pulse	web splice		0518
M03.16		Pulse	overl.FFU		0519
M03.17		Pulse	inching		0520
M04.00		Synchronization		machine speed	1414, 1415, *1415, *1416, 1418, 1419

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Address	Position	Function		used in rungs
M04.01		Too high speed		*1417, *1420, 2802, 5008
M04.02		Pulse package		1414
M04.03		Pulse package		1415
M04.04		Venting aseptic chamber		0609, 0625, 0633, 0636, 0639, 0640, 0641, 0642, 0643, 0659, 0660, 0702, 0705, 0706, 0708, 0719, 0902, 0907, 0909, 1216, 1231, 1232, *2302, *2303, 2304, 2306, 2308, 2309, 2311, 2313, 2604, 2907, 5208, 5307
M04.05		Memory door aseptic	chamber	0626, 0636, 0660, 2303, *2311, *2312
M04.06		Venting 5 minutes		0639, 0640, 0641, 0642, 0643, 1004, 2302, *2304, *2305, 2307
M04.07		Venting 15 minutes		0639, 0640, 0641, 0642, 0643, 0911, 2302, 2305, *2306, *2307, 2310, 5208
M04.10		Venting 5 or 15 minutes		0660, 1232, *2310, 2311, 2313
M04.11		Pulse gen. 1/2 HZ		0521
M04.12		Flash 1/2 Hz		*0521, 0632
M04.13		Sensor check		*1212, 1215, 1227, 1228, 1243
M04.14		Overload jawsystem		1403, *1711, *1712, 2406, 2802
M04.15		Monitor temperature	peroxide bath, peroxide	*1229, *1230, 2002, 5114
M04.16		Pulse P2-recorder		2602
M05.00		Initiation com.area PI		0504
M05.01		Enable on calculation	FFU position	*2119, 2122, 2123
M05.03		Start pulse FFU		2133
M05.04		Pulse pos. FFU		9909
M05.05		Synchroniz. pulse FFU		2120
M05.06		Synchroniz. pulse FFU		9907
M05.07		Start pulse FFU		2133
M05.10		Pulse alarm reset push.		0522
M05.11		Output for pulse	alarm reset	*0522, 0623, 1205, 1206, 1207, 1209, 1210, 2148, 2149
M05.12		Synchronization sector	FFU	*2120, 2121, 2122, 2124
M05.13		Synchronization sector	FFU	*9907, 9908, 9910
M05.14		Start sector FFU		2130, *2133, *2134, 2135

Address	Position	Function		used in rungs
M05.15		Low speed FFU		*2131, *2135, *2136, *2137, *2138, 2139
M05.16		Pulse precorr.out		1906
M05.17		Pulse sync. drop ch.FFU		2141
M06.01		Cleaningpipes in wrong	position for preheating	0625, *0726
M06.02		Level in spray tank	after spray fault	0625, *0905, *0906, 0907, 5208, 5215
M06.03		Preheating ready		0618, 0625, 0644, 0645, *0717, 5204, 5317
M06.04		Demand I for	short stop	*2002, 2003, *2003, 2004
M06.05		Demand II for	short stop	0625, *2004, 2005, 2130, 5512
M06.06		Demand III for	short stop	0616, 0625, 1202, 1402, *2005, 2006
M06.07		Machine in position	short stop on	0608, 0617, 0620, 0625, 0639, 0640, 0641, 0642, 0643, 0651, 0654, 0655, 0656, 1105, 1202, 1234, 1235, 1305, 1410, 1803, 1807, 2006, *2006, 2007, 2117, 2142, 2203, 2204, 2804
M06.10		Ready cleaning		0606, 0609, 0626, 0628, 0661, 0662, 0702, 0706, 0712, 0726, 0902, 0907, 0914, 1010, 1220, 1222, 1223, 1302, 1315, 1322, 2117, 2138, 2153, 2303, 2314, 2319, 2320, 2402, 2405, 2407, *2407, 2408, 2604, 2907, 2909, 5213, 5216, 5309, 5409, 5410
M06.11		Conditions for	external cleaning	0626, 0663, 2102, *2402, 2403, *2403, 2404
M06.12		Conditions for	internal cleaning	0626, 0635, 0664, *2314, 2315, *2315, 2316
M06.13		Supervision of B-valve	during internal cleaning	*1009, *1010, 2904
M06.14		Jump to ladderposition	sterilizing fullfilled	0625, 2006, *2802, 2803, *2803, 2804
M06.15		Jump to ladderposition	sterilizing fullfilled	0616, 0617, *2804, 5512
M06.16		Wrong position of	AP-valve (B)	0614, *1006, *1007, *1008, 1010, 2314, 2802, 5214
M06.17		External cleaning		0606, 0626, 0628, 0633, 0639, 0640, 0641, 0642, 0643, 0661, 0663, 1323, 2137, 2138, 2404, *2404, 2406, 2410, 2411, 2412, 2414, 2418, 2419
M07.00		Alarm low level tank per.	or too long refilling	1238, *1239, *1240, 1241, 5318

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Address	Position	Function		used in rungs
M07.01		Refilling peroxide		*1237, 1238
M07.02		Peroxide pump stopped	during peroxide change	0625, 1216, 1238, *1243, *1244
M07.03		Sond select high/low	level tank peroxide	*1235, 1236
M07.04		Level check peroxide bath	during production	*1213, 1215
M07.05		Level too high in	peroxide tank	*1245, 1247, 1248, *1249, 1250, 1251, 5403
M07.06		High level supervision	in peroxide tank	1218, 1219, 1220, *1246, *1247, 1249
M07.10		Level in peroxide tank		*1236, 1238, 1239, 1240, 1242, 1245
M07.11		Memory level too high	in peroxide tank	1216, 1238, *1250, *1251, 2802, 5403
M07.12		Process signal cleaning	through product valve (A)	1407, 2315, *2317, *2319, 5209
M07.13		Memory machineladder	to 0-position	0616, 0620, 0625, 1202, 2006, 2307, *2903, *2905, *2906, *2907, *2908, 2909, 5512
M07.14		Reset machineladder	to zeroposition	0612, 2602, *2909, 5512
M07.15		Aux.memory for jump	to position 0	*2902, 2903
M07.16		Aux.memory for jump	to position 0	*2904, 2905
M07.17		Key signal cleaning	of steambarrier valve (C)	1407, 2315, *2318, *2320, 5412
M10.00		Reset manual stop	of filling	*0602, *0603, 0625, 0635, 0654, 1106
M10.01		Sterileconditions	bypassed	*0604, *0605, 0613, 0646, 0649, 0650, 0651, 0656, 0802, 0902, 1105, 2008, 2604, 2902, 2909, 5304
M10.02		Manual step down	to zero position	*0606, 0612
M10.03		Memory signal recived	from sterilizer	0511, 0650, 0651, *1103, *1104, 2804
M10.04		Waterfilling of	cleaning tray	*2409, 2412, 2413, 2414, 2416
M10.05		Malfunction filling	cleantray	2402, 2422, *2422, *2423, *2424, 5316
M10.06		Transversal	sealing on	*1705, *1706, 9902
M10.07		Alarm low pressure	during lubrication	2004, *2509, *2510, 5012
M10.10		Alarm reset pulse		1248
M10.11		Manual step up	to position 7	*0607, *0608, 0622
M10.12		Temperature LS/SA	out of limit	*0716, 2003
M10.13		Package ejection	FFU activated	0615, *1919, *1920, *1921, 2140
M10.15		Malfunction during	spray sequence	0614, 0907, 0908, 0909, *0910, *0911, 1216, 2307, 2902
M10.16		Sterileairinlet valve	in wrong position	0614, 0625, 0907, 0908, 0909, 0910, *0912, *0913, 1216, 2902, 5303

Address	Position	Function		used in rungs
M10.17		High level separator		*0703, *0704, 2904, 5308
M11.00		Levelfault in hydrogen	peroxidebath	*1214, *1215, 2003, 2603, 5203
M11.01		Fault in IH-units	transversalsealing	*1702, *1703, 1704, 9903
M11.02		Fault in IH-unit	zoneheater	*1707, *1708, 1709, 5112
M11.03		Squeeze rollers	in wrong position	*1225, *1227, 2002, 5205
M11.04		Aux. printed design	correction valve feeding	*1803, 1804, *1804
M11.05		Stop delay of FFU		0633, 1921, *2117, 2137, 2149, 2152, 2909
M11.06		Drop chute FFU on		2140, *2140, 2143
M11.07		Long lubrication	period	0515, 2503, 2505, *2506, *2507, 2508
M11.10		Signal photocells	printed design missing	*1811, *1812, 2802, 5408
M11.11		Machine in design		0619, 0654, 0655, 1106, 1317, 1710, 1803, *1805, *1806, *1807, *1808, 1811, 1906, 2804, 5310
M11.13		Malfunction circulation	pump	2403, 2425, *2425, *2426, 5316
M11.14		Syncronization	drop chute FFU	*2141, 2142, 2143
M11.15		Airknives wrong position		*1226, *1228, 2002, 5206
M11.16		Spraying fullfilled		0606, 0639, 0640, 0641, 0642, 0643, 0648, 0649, 0905, *0914, 1002, 1005, 1012, 2203, 2307, 2604, 2902, 5207
M11.17		Drying fullfilled		0614, 0616, 0617, 0625, 0650, *1005, 1010, 1202, 1211, 1217, 1235, 2305, 2307, 2602, 2604, 5217
M12.00		Tubesealing	going on	0606, 0645, 0646, 0802, *0802, 1402
M12.01		Auxiliary output	drivemotor	0633, 1218, 1219, *1402, 1403, 2137
M12.02		Speeddetermation motor	FFU	*2103, 2104, 2106, 2107, 2110, 2112, 2118, 2140, 2143, 2150, 2151, 2153
M12.03		Papersupply at its end		*1302, *1303, 1304, 1305, 1307
M12.04		Memory for automatic	splicing paperweb	0628, *1305, *1306, 1307, 1308, 5317
M12.05		Papersupply refilled	after paperwebsplicing	1302, *1319, *1320
M12.06		Auxilliary memory	ASU-motor on	*1315, 1316, 1317, 1318
M12.07		Memory for start of	splicing paperweb	*1308, *1309, 1311, 1313, 1315, 1317, 1319, 5317

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Address	Position	Function		used in rungs
M12.10		No sterile conditions	by-passed	0649, *0902, 0904, 0907, 1003
M12.11		Operational parameters	on P2-recorder	*2603, 2604
M12.12		Operational parameters	on P2-recorder	*2604, 2605
M13.00		Mainsinterrupt to long	for sterile conditions	0609, *2705, 2909
M13.01		Alarmdelay by restart	after mainsinterrupt	0609, 0623, 0706, 0724, 0729, 0911, 0912, *2704, 2706, 2803, 2908
M13.02		Pulse dry fullfilled		2602
M14.00		Auxiliary output	startsequence	0514, 0616, 1106, 1202, *1202, 1203, 1204, 1212, 1215, 1217, 1218, 1219, 1220, 1232, 1249, 1704, 2008, 2117, 2118, 2137
M14.02		Auxiliary output	stopsequence ext.cleaning	2137, 2410, *2411, *2412, 2414, 2418
M14.03		Sterile airpressure	too low	*0723, *0724, *0725, 2904, 5307
M14.04		Reset emergency stop		0610, 0627, 0638, 0718, 1205, *1205, 1206, 1207, 1209, 1210, 1211, 1217, 2302, 2304, 2306, 2307, 2309, 5006, 5007
M14.05		Reset safety monitors		0626, 0627, 0638, 1206, *1206, 1308, 1313, 1403, 2110, 2118, 2402, 2406, 2804, 5005
M14.06		Reset jaw system overload		1207, *1207, 5016, 5411
M14.07		Reset overload protection		0627, 0628, 0634, 0718, 1208, *1208, 1403, 2110, 2118, 2402, 2406, 2804, 5010
M14.10		Reset door guards tower		1209, *1209, 5007, 5016
M14.11		Reset upper door guard	ASU	1210, *1210, 1308, 1313, 5005, 5411
M14.16		Memory for delay on	redundancy	*0624, 0625, 0628, 0633, 1202, 2135, 2314, 2402
M14.17		Main air pressure lost		0609, *0610, *0611, 0625, 0706, 2303, 2909, 5004
M15.00		Max.runtime fault central	lubrication/FFU	2004, *2703
M15.01		Oilpressure of FFU		*2151, 2703, 5314
M15.02		Waterpressure	coolingwater	0718, *2702, 2802, 5003
M15.03		Malfunction in external	package supervision	*2114, *2115, 2116, 5405
M15.04		Alarmstatus in FFU		0625, 0628, 0633, 2004, 2103, *2116, 2117, 2118, 2139, 2148, 2149, 2402

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Address	Position	Function		used in rungs
M15.05		Malfunction conveyor	infeed FFU	*2107, *2109, 2116, 5312
M15.07		Door monitor ASU	activated too long	*1326, 1327, 2004
M15.10		Malfunction of	paper splicing	0628, *1307, 1308, 1327, 2004
M15.11		Malfunction in rotation	monitor FFU	*2104, *2105, 2116, 5313
M15.12		Rotation monitor	paperwebfault	1315, *1321, *1322, *1323, 1327, 1403, 2402, 2803, 5108
M15.13		Malfunction in	synchronization of FFU	*2106, *2108, 2116, 5404
M15.14		Overload in FFU		*2110, *2111, 2116, 5313
M15.15		Malfunction in	outfeeding of FFU	*2112, *2113, 2116, 5315
M15.16		Alarm pressureguard	waterbath	*0710, *0711, 0713, 2603, 2803, 5113
M16.00		Magazine empty ASU		1318, *1324, *1325, 1327, 1403, 2803, 5107
M16.01		ASU ready		0625, 0628, *1327
M16.02		Pulse infeed FFU		*2144, 2145, 2146, 2147
M16.03		Pulse inf. congestion		2144
M16.04		Memory package in outfeed	FFU	2112, *2147, *2148
M16.05		Outfeed FFU pulse		2148
M16.06		Outfeed FFU pulse		2148
M16.10		Memory for scan pulse		*1815, 1816, 1819, 1823, 1824, 1825, 1826
M16.11		Memory for data bits	shifted	1823, *1825, *1826, 1827
M16.17		Delay on external	cleaning available	0626, 2404, *2405
M17.00		Steambarr. valve off		1406
M22.00		First alarm		5509, 5510, 5511, *5512, *5513
M22.02		Pulse alarm reset 1-32		5506
M22.03		Pulse alarm reset 33-64		5507
M22.04		Pulse alarm reset 65-96		5508
M23		Word alarm encoding		*5002, 5017, *5102, 5116, *5202, 5218, *5302, 5319, *5402, 5413, *5502, 5505
M23.00		Bit alarm encoding		*5003, *5103, *5203, *5303, *5403, *5503
M23.01		Bit alarm encoding		*5004, *5204, *5304, *5404, *5504
M23.02		Bit alarm encoding		*5005, *5205, *5305, *5405

Address	Position	Function			used in rungs
M23.03		Bit alarm encoding			*5006, *5206, *5306, *5406
M23.04		Bit alarm encoding			*5104, *5207, *5307, *5407
M23.05		Bit alarm encoding			*5007, *5105, *5208, *5308, *5408
M23.06		Bit alarm encoding			*5008, *5106, *5209, *5309, *5409
M23.07		Bit alarm encoding			*5009, *5107, *5210, *5310, *5410
M23.10		Bit alarm encoding			*5108, *5211, *5311
M23.11		Bit alarm encoding			*5010, *5109, *5212, *5312
M23.12		Bit alarm encoding			*5011, *5110, *5213, *5313
M23.13		Bit alarm encoding			*5012, *5111, *5314
M23.14		Bit alarm encoding			*5013, *5112, *5214, *5315
M23.15		Bit alarm encoding			*5014, *5113, *5215, *5316, *5411
M23.16		Bit alarm encoding			*5015, *5114, *5216, *5317
M23.17		Bit alarm encoding			*5016, *5115, *5217, *5318, *5412
M27.00		External clening ended:		ready for lubrication	0515, *2420, *2421
M27.17		Dummy	adress		5512
M37.00		Flash	1 Hz		0521, 0632, 0633, 0635, 0636, 0638, 0656, 0660, 0714, 0728, 0903, 1002, 1241, 2410, 5403
M37.01		Flash	5 Hz		0623
M37.14		First	scan		0502, 0503, 0606, 1804, 1808, 1822
M37.15		Low PLC	battery		5103
M37.17		Triggpulse for		shiftregister	*1823, 1825, 1826, *1914, 1920, *2145
M100.00		Send communication area		to Panel Interface	*0504
M140.06		PIDAT			0504
O14.00	K001	Main motor		low speed	1302, 1308, 1317, 1321, 1323, 1403, 1405, 1820, 2117, 2119, *2406
O14.01	K002	Main motor		high speed	0616, 1214, 1217, 1221, 1222, 1223, 1225, 1226, 1233, 1234, 1302, 1308, 1315, 1317, 1321, 1322, *1403, 1404, 1405, 1406, 1407, 1409, 1410, 1702, 1706, 1707, 1710, 1802, 1809, 2129, 2131, 2134, 2145, 2150, 2203, 2402, 2406, 2503, 2505, 2907, 2909, 5512

Address	Position	Function		used in rungs
O14.02	K004	Mechanical brake		0513, 0632, 0635, 0718, *1405, 1712, 1812, 1921, 2105, 2108, 2109, 2111, 2113, 9910
O14.03	K006	FFU motor		*2118
O14.04	K007-K008	Bending rollers	power	0712, *0712, 1315, 2202
O14.05	K012	Circulation pump	external cleaning	*2418, 2426
O14.06	K014,M.Y069	External conveyor/	external lubrication	*2152
O14.07	M.Y027	Drop chute FFU		1412, *2142, *2143, 2145, 2150
O14.10	K011	Hydrogen peroxide pump		*1216, 1217, *1217, 1218, 1219, 1237, 1239, 1245
O14.11	K010	Sterile air compressor		*0702, 0715, 0723, 2312
O14.12	K009	Pump hydraulic system		*0718
O14.13	M.Y021	Air knives	Squeeze rollers	*1221
O14.14	M.Y026	LS-counter roller	short stop	1222, *1222
O14.15	M.Y024	LS/SA elements movement		*1223
O14.16	M.Y020	Short stop elements	movement	*1224
O14.17	M.Y102	Main air valve		0609, *0609, 0610, 1804
O15.00	K018	Preheating I		0605, 0644, 0658, *0706, 0707, 0712, 0713, 0716, 0908, 0909, 1234, 1238, 1709, 2511, 2909, 5111, 5112, 5204, 5217, 5306, 5317, 5406, 5407
O15.02	K005	Power on		*0705, 2103
O15.04	K022	Preheating II	flapsealing FFU on	1011, *1012, 5217
O15.06	K015	Pump detergent	solution	*2417
O15.07	K112	Aux.relay for	cleaningtray level	*2415
O15.11	K019	Hydrogen peroxide bath	element	*0713
O15.12	A004	Design control system	enable signal	1817, 1818, *1820, 1821, *1828
O15.13	G001	Start FFU		0633, 2103, *2139
O15.14	G001	High speed FFU		*2128, *2129, *2130, 2135, 2136, 2139
O15.15	A002	Upper bending roller	production	*2202, *2203
O15.16	A002	Upper bending roller	start after short stop	2203, 2204, *2204
O15.17	P003	Reset downcounter	paper supply	*1304
O16.00	K016	Power IH-units	transversal sealing	*1704, 2804

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Address	Position	Function		used in rungs
O16.01	K017	Power IH-unit	zone heater	1708, *1709, 1710
O16.02	A004	Design control system	clock signal	1818, *1818, *1819
O16.03	A004	Design control system	data signal	*1827
O16.05	A006	Zoneheater on		*1710
O16.06	A003	ASU-motor low speed		*1317
O16.07	A003	ASU-motor high speed		*1316, 1317
O16.10	K202	Alarm beacon		*0638
O16.11	P005-6,K051	Package counter		*1412
O16.12	K050	Total paper counter		*1413
O16.13	A401	Transversal sealing left		*9904
O16.14	A402	Transversal sealing right		*9905
O16.15	M.H015:5	Hydraulic unit	high level (green)	*0720
O16.16	M.H016:5	Hydraulic unit	medium level (yellow)	*0721
O16.17	M.H017:5	Hydraulic unit	low level (red)	*0722
O17.02	K105	Sterile parameters	on P002 recorder	*2602
O17.03	K106	Operational parameters	on P002 recorder	*2605
O17.04	K108	Process signal	request for product	*1102, 1104, 5211
O17.05	K109	Process signal	in production	*1105
O17.06	K110	Process signal	filling on	*1106
O17.07	K111	Process signal	signal ready for CIP	0606, 0626, 0635, 0662, 0664, 0718, 1004, 1407, 1411, 2316, *2316, 2605, 2909
O17.10	K121	Aux. relay for LS/SA	fan motor	*0707, 5307
O17.11	A004	Printed design correction	valve feeding	*1802, *1804
O17.13	K125	Fan air cooler	control cabinet	*0708, 0709
O17.14	K127	Auxiliary relay reset		*0623
O20.00	M.Y047	Splicer pressure jaw ASU		1303, *1310, 1313, *1313, 1315
O20.01	M.Y009	Product valve (A)		1233, *1411
O20.02	M.Y006	Peroxide bath	filling,draining	1219, *1219
O20.03	M.Y007	Steambarrier valve (C)		1402, *1406, *1407, *1408, 1409
O20.04	M.Y008	Sterile air valve (B)		*1004, 1007, 1234
O20.06	M.Y023	Suction valve	dryer/bath	*1231, *1232
O20.07	M.Y044	Preheating,air inlet and	heat exchanger valve	*0909, 0913, 1234, 1406

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Address	Position	Function			used in rungs
O20.10	M.Y001	Flap sealing air FFU			0609, *1011
O20.12	M.Y046	Splicer brake ASU			1307, 1310, *1311, *1312, 1314, 1316
O20.13	M.Y045	Drive unit pressure		roll ASU	*1318
O20.14	M.Y054	Evacuation hydrogen		peroxide	*0719
O20.15	M.Y002	Cleaning tray		draining	*2416, 2417
O20.16	M.Y038	Refilling hydrogen		peroxide tank	*1238, 1240
O20.17	M.Y037	Central refilling		lubrication oil	*2511
O21.00	M.Y005	Peroxide bath		draining	*1218
O21.01	M.Y018	Peroxide bath		top filling	*1220
O21.02	M.Y071	Suction valve aseptic		chamber	*1234
O21.03	M.Y086	Vacuum valve venting		aseptic chamber	*2313
O21.04	M.Y017	Central lubrication pump			2503, 2505, *2508, 2509, 2510
O21.05	M.Y028	Airblowing infeed of		FFU	*2150
O21.06	M.Y029	External cleaning		water	*2414, 2417, 2419
O21.11	M.Y033	Cooling water			*0709
O21.12	M.Y036	Manual flushing FFU			*2102
O21.13	M.Y034	Spray tank filling		hydrogen peroxide	*0907
O21.14	M.Y035	Spray tank air			*0908, 2902
O21.15	M.Y070	Air compensation valve			*1233
O21.16	M.Y090	Revfin left			*2153
O21.17	M.Y091	Revfin right			*2153
PI0.00	P.S033H	Alarm	reset		0522, 0611, 0704, 0710, 0725, 0905, 0911, 1006, 1009, 1208, 1214, 1225, 1226, 1229, 1239, 1251, 1321, 1420, 1702, 1707, 1712, 1812, 2105, 2108, 2109, 2111, 2113, 2115, 2422, 2425, 2908, 5506, 5507, 5508, 5513
PI0.02		Flash	new alarms		0638
PI0.03	P.S002	Inching	mainmotor		0513, 0520, 0620, 0632, 0635, 0802, 1106, 1202, 1218, 1235, 1245, 1402, 1407, 1409, 2119, 2138, 2406, 2408
PI0.04	P.S009	Inching	FFU		2105, 2111, 2137, 2138, 2152
PI0.05	P.S030H	Step	Up		0505, 0602, 0607, 0609, 0613, 0620, 0622, 0632, 0635, 0702, 1202, 1229, 1420, 2008,

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Address	Position	Function			used in rungs
					2316, 2407, 2411, 5307
PI0.06	P.S031H	Step	down		0505, 0506, 0603, 0606, 0616, 0620, 0627, 2006, 2307, 2316, 2404
PI0.07	P.S007	Selector	switch		0515, 0622, 0626, 0628, 0632, 0635, 0644, 0661, 0662, 0702, 0726, 1202, 1402, 2005, 2316, 2404, 2406, 2407, 5111, 5213, 5216, 5309, 5409, 5410
PI0.11	P.S020	Manualflush	FFU		2102
PI0.12	P.S032H	Short	stop		0505, 0627, 2005, 2124, 2125, 2130
PI0.17	P.S019	Package	ejector		2140
PL0	P.H001-016				*5509
PL1	P.H017-032	Alarm 17-32	on display		5509
PL2	P.H033-048				*5510
PL3	P.H049-064	Alarm 49-64	on display		5510
PL4	P.H065-080				*5511
PL5	P.H0081-096	Alarm 81-96	on display		5511
PL6.07	P.H108	20% to 0% time left			*0643
PL6.10	P.H107	40% to 20% time left			*0642
PL6.11	P.H106	60% to 40% time left			*0641
PL6.12	P.H105	80% to 60% time left			*0640
PL6.13	P.H104	100% to 80% time left			*0639
PL6.14	P.H109	Symbol preheating			*0644
PL6.15	P.H110	Symbol preheating		finished	*0645
PL6.16	P.H111	Symbol tube sealing			*0646
PL6.17	P.H112	Symbol tube sealing		finished	*0647
PL7.00	P.H113	Symbol spraying			*0648
PL7.01	P.H114	Symbol drying			*0649
PL7.02	P.H115	Symbol signal to		sterilizer	*0650, 0651
PL7.03	P.H116	Symbol signal from		sterilizer	*0651
PL7.04	P.H117	Symbol motorstart			*0652
PL7.05	P.H118	Symbol drivemotor on			*0653
PL7.06	P.H119	Symbol filling on			*0654
PL7.07	P.H120	Symbol production			*0655

Address	Position	Function		used in rungs
PL7.10	P.H121	Symbol short stop		*0656, 0657
PL7.11	P.H122	Symbol production	finished	*0658
PL7.12	P.H123	Symbol venting aseptic	chamber	*0659
PL7.13	P.H124	Symbol door aseptic	chamber	*0660
PL7.14	P.H125	Symbol ready for external	cleaning	*0661, 0663
PL7.15	P.H126	Symbol ready for cleaning	of filling system	*0662, 0664
PL7.16	P.H127	Symbol external cleaning		*0663
PL7.17	P.H128	Symbol cleaning	of filling system	*0664
PO0.00		Alarm panel reset		*1248
PO0.01	P.H002S	Symbol inching	in push button panel	*0632
PO0.02	P.H009S	Symbol inching FFU	in push button panel	*0633, 0634, *0634
PO0.03	P.H030S	Symbol step up	in push button panel	*0635, 0644, 0646, 0648, 0650, 0652, 0654, 0661, 0662, 0663, 0664
PO0.04	P.H031S	Symbol step down	in push button panel	*0636
PO0.05	P.H032S	Symbol short stop	in push button panel	*0637, *0657
PO0.06	P.H033S	Symbol alarm reset	in push button panel	*0638
PO0.15	P.H077	Symbol short stop		0637
R0000		Storage word for position	machine ladder	*0612, *0613, *0614, *0615, *0616, *0617, *0618, *0619, *0620, *0621, *0622, 0629, 0630, 0631
R0010		Storage word shift reg.	package dumping (1-16)	1902, *1902, 1906, *1906, 1907, *1907, 1908, *1908, *1915, 1916
R0011		Storage word shift reg.	package dumping (17-32)	1903, *1903, 1909, *1909, 1915, *1916
R0012		Storage word shift reg.	package dumping (33-48)	1904, *1904, 1910, *1910, 1912, *1912, 1915, *1917
R0013		Storage word shift reg.	package dumping (49-64)	1905, *1905, 1911, *1911, 1913, *1913, 1915, *1918
R0020		Sequencer for packages	into FFU	*2146, 2147, *2149
R0100		Storage word for	transversal sealing	1706, 9902, *9902, *9903, 9904, 9905
R0110		Storege word for	repeat length	1821, *1824
R0111		Storage word for	production sector	*1821, 1824
R0112		Repeat length		1821, 1822

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Address	Position	Function		used in rungs
R0113		Transferring word for	production sector	1821, *1822
R0140		New alarms trans 1		5002, 5017, 5506, 5509, 5512
R0141		New alarms trans 2		5102, 5116, 5506, 5509, 5512
R0142		New alarms trans 3		5202, 5218, 5507, 5510, 5512
R0143		New alarms trans 4		5302, 5319, 5507, 5510, 5512
R0144		New alarms trans 5		5402, 5413, 5508, 5511, 5512
R0145		New alarms trans 6		5502, 5505, 5508, 5511, 5512
R0146		New alarms store 1		5002, 5017, *5017, *5506, 5512
R0147		New alarms store 2		5102, 5116, *5116, 5506, 5512
R0148		New alarms store 3		5202, 5218, *5218, *5507, 5512
R0149		New alarms store 4		5302, 5319, *5319, 5507, 5512
R0150		New alarms store 5		5402, 5413, *5413, *5508, 5512
R0151		New alarms store 6		5502, 5505, *5505, 5508, 5512
R0200		Position of	filling machine	2122, *9908
R0201		Position of FFU		2122, 2123, *9909
R0202		Deviation FFU	ahead of filling machine	2121, *2122, 2124, 2128
R0203		Deviation FFU later	than filling machine	*2121, *2123, 2125, 2129
R0204		Switch for high speed	of FFU	2124, *2124, 2125, *2125, 2126, *2126, 2127, *2127, 2128
R0205		Reference timer FFU		2128, 9906, *9906, 9908, 9909, *9910
R0254		Storage word time	mains interrupt	2704, 2705, *2706
R3500		Panel int. config.		0502
R3501		Panel int. config.		0502
R3502		Panel int. config.		0502
R3503		Panel int. config.		0502
R3504		Panel int. config.		0502
R3505		Storage word for panel	interface configuration	*0502
R3506		Panel int. config.		0503
R3507		Storage word for panel	interface configuration	*0503
SO0.02	100-277	Side change		2005, 9904, 9905
SO0.03	55- 65 255-265	Sector brake		0507, 0514

Address	Position	Function			used in rungs
SO0.04	67-146 267-346	Transversal	sealing		9903
SO0.05	115-124 315-324	Scan	shiftreg.		0509, 1412, 1414, 1415
SO0.06	65-264	Start	sector FFU		2131, 2133
SO0.07	47- 66 247-266	Filling	sector 0		0621
SO0.08	67-106 267-306	Filling	sector 1		0621
SO0.09	50-150 250-350	Synchroniz.	sector FFU		2120, 2123, 2125, 9907
SO0.10	107-126 307-326	Filling	sector 2		0621
SO0.11	127-146 327-346	Filling	sector 3		0621
T000		Start sequencer		production start	*1203
T001		Start sequencer		production start	*1204
T003		Maximum time in		short stop position	*2007, *2008
T004		Sequencer for		paper splicing	*1314
T006		Sequencer for circulation		of hydrogen peroxide	*1211
T010		Sequencer for		lubrication program	*2502, *2503
T011		Sequencer for		lubrication program	*2504, *2505
T012		Sequencer for mechanical		and DC-brake main motor	*1404
T013		Timer venting position			*2308, *2309
T014		Sequencer sorting		packages FFU	*2132
T045		Speed timer			*1418
TO000.0	0s0 15s0	Ready for	motor start		0652
TO000.1	10s0 15s2	End start	sequence		0616, 0620, 0652, 0653, 1219, 1402, 1406, 1407, 2006, 2135, 2604
TO000.2	4s0 15s2	Delay sort.	sequence		1703, 2132, 2135, 5009, 5311

LIST OF ADDRESSES

Address	Position	Function		used in rungs
TO000.3	9s9 15s2	Counterroll	LS sh.stop	1222, 1227, 1228
TO000.4	8s5 15s2	SQ roller/	airknife on	1221
TO000.5	9s5 15s2	Product	valve on	1230, 1411
TO001.0	0s00 18s00	End of	start seq.	1220
TO001.1	6s50 9s20	Move short	stop elem.	1224
TO001.2	9s00 18s20	Move LS-SA	element	1223
TO001.3	16s00 18s20	Level check	perox.bath	1215
TO001.4	6s00 18s20	LS-roller	short stop	1222
TO001.5	0s00 0s00	Start after	short stop	2204
TO003.0	15m00s 16m00s	Time out	short stop	2802
TO003.1	0s 14m00s	Alarm short	stop time	0656
TO003.3	1m00s 16m00s	Edgewicking	short stop	1234
TO003.4	11s 16m00s	Edgewicking	short stop	1231
TO003.5	55s 1m05s	Edgewicking	short stop	1233
TO004.0	5s5 5s7	Sequence	ASU	1306, 1309, 1314
TO004.1	4s0 5s5	Pinbrake/	splicer off	1303, 1307, 1312, 1313, 1315, 1320
TO004.2	3s0 5s5	End of	splice seq.	1314

LIST OF ADDRESSES

Address	Position	Function		used in rungs
TO004.3	0s3	Delay	splice ASU	1310
	3s0			
TO006.0	5m00s0	End of	circ. seq.	1211
	5m01s0			
TO006.1	0s0	Circ. time	by stop	1217
	1m00s0			
TO006.2	3m30s0	Circ. time	by running	1217
	5m00s0			
TO006.3	35s0	Top filling	time	1220
	40s0			
TO006.4	28s0	Sensorcheck	perox. tank	1245
	29s0			
TO010.0	15m00s	End of	lubr. seq.	2502
	15m02s			
TO010.1	0s	1-st stroke	long lubr.	2508
	10s			
TO010.2	1m10s	2-nd stroke	long lubr.	2508
	1m20s			
TO010.3	2m20s	3-rd stroke	long lubr.	2508
	2m30s			
TO010.4	3m30s	4-th stroke	long lubr.	2508
	3m40s			
TO010.5	4m40s	5-th stroke	long lubr.	2508
	4m50s			
TO011.0	15m00s	End of	lubr. seq.	2504
	15m02s			
TO011.1	4m50s	Long lubr.	finished	2507
	15m00s			
TO012.0	0s00	Mechanical/	DC-brake	1402, 2119
	10s00			
TO012.2	0s00	Mechanical	brake on	1237, 1405
	0s10			
TO012.4	0s00	FFU short	emptying	2117
	2s00			

LIST OF ADDRESSES

Address	Position	Function		used in rungs
TO012.5	0s00 1s00	Bending	roller stop	2203
TO013.0	1h00m00s 1h00m01s	Max time	venting	2303
TO013.1	0s 5m00s	Venting	5 min.	2310
TO013.2	0s 15m00s	Venting	15 min.	2310
TO013.3	30s 15m00s	Draining	spray pipe	0907
TO014.1	0s070 1s500	Sorting	outfeed FFU	2131, 2132
TO014.2	0s900 1s500	Sorting	outfeed FFU	2131
TO045.0	0s00 59s96	End of	speed seq.	1417
TV003		Short stop	time value	0639, 0640, 0641, 0642, 0643
TV013		Venting	time value	0639, 0640, 0641, 0642, 0643

LIST OF BLOCKS

05 PULSE AND FLASHGENERATING
06 POSITIONS MACHINELADDER
07 PREHEATING
08 TUBESEALING
09 SPRAYING
10 DRYING
11 SIGNALS TO AND FROM STERILIZER
12 STARTSEQUENCER FOR RUNNING PRODUCTION
13 AUTOMATIC SPLICING UNIT
14 DRIVEMOTOR AND PRODUCTION
17 TRANSVERSAL SEALING AND ZONE HEATER
18 CORRECTION PRINTED DESIGN
19 DUMPING OF PACKAGES
20 NO PRODUCTION ALLOWED
21 FINAL FOLDING UNIT
22 DRIVEN BENDING ROLLER
23 PRODUCTION ENDED, WORK ENVIRONMENT ASEPTIC CHAMBER, INTERNAL CLEANING
24 EXTERNAL CLEANING
25 LUBRICATION
26 6+4 CHANNELS RECORDER
27 MAINSINTERRUPT AND ALARMDELAYS
28 JUMP TO MACHINELADDER POSITION 3 (STERILIZATION FULLFILLED)
29 JUMP TO MACHINELADDER POSITION ZERO
50 ALARM 1 TO 16 ON ALARMDISPLAY (PL0.00-17)
51 ALARM 17 TO 32 ON ALARMDISPLAY (PL1.00-17)
52 ALARM 33 TO 48 ON ALARMDISPLAY (PL2.00-17)
53 ALARM 49 TO 64 ON ALARMDISPLAY (PL3.00-17)
54 ALARM 65 TO 80 ON ALARMDISPLAY (PL4.00-17)
55 ALARM 81 TO 96 ON ALARMDISPLAY (PL5.00-17) / ALARM BEACON
90 MEDIUM SCAN FUNCTIONS
99 FAST SCAN FUNCTIONS

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AM NO.	DRAWING-NO.	ALTERATIONS
19666	BE-649171-100V	DOCUMENTATION RELEASED.

MAIN CHANGES ON THIS DEVELOPMENT STEP

P.A100 NEW PANEL INTERFACE 90025-0088 IS USED

THE TEMPERATURE REGULATORS HAS BEEN CHANGED TO 90410-0044.

THE FUSES ARE CHANGED TO BBC SERIES 280. TPMC 64.1 90025-0070 IS INTRODUCED.

A012, A013 SAFETY MODULES ARE ADDED.

K30 CONTACTOR TO ENSURE REDUNDANCE IS INTRODUCED.

A002, A003 MOTOR DRIVE CONTROLS ARE CHANGED FROM 90430-0030 TO 90430-0037.

THE EQUIPMENT FOR ZONE HEATER IS PLACED AS EXTRA EQUIPMENT.

AM NO.	DRAWING-NO.	ALTERATIONS
20127	FOR CHANGES ON LISTS, SEE AM-APPENDIX.	
	44173-02:01	POSITION SUMMARY CHANGED ACCORDING TO CIRUIT DIAGRAM.
	44173-05:01	TERMINALS X010, ADDED. FILTERS ARE STANDARD.
	44173-11:01	DETERGENT PUMP, M.M006, IS MOVED.
	44173-12:01	K8 IS ADDED. CONNECTION ORDER CHANGED.
	44173-13:01	DIMENSION IS ADDED.
	44173-14:01	CONNECTION ORDER ADDED, AND CABLE COLOURS IS ADDED TO M.M001:1, BRAKE.
	44173-17:01	POSITION NUMBER ADDED. SYMBOL ADJUSTED. CONNECTIONS ARE CHANGED.
	44173-21:01	CONTACT FROM K22 IS ADDED.
	44173-29:01	TEXT: M.B061, IS REMOVED.
	44173-32:01	CONNECTIONS ARE CORRECTED. CONN.ORDER CHANGED TO K51, SYMBOL FOR SHORT STOP IS CORRECTED.
	44173-33:01	A4 TMCC CARD HAS REPLACED MULTISTEP CARD.
	44173-35:01	K8 IS INTRODUCED. CONN.ORDER CHANGED TO K101. M.B098 INTRODUCED AS 2 POLE.
	44173-36:01	K128 AND S15 ARE INTRODUCED. MY32 IS MOVED.
	44173-37:01	M.S3 CONNECTION ALTERED.
	44173-38:01	CONNECTION ADJUSTED OF A13:S13.
	44173-39:01	CONNECTION TO A4 ARE CORRECTED.
	44173-40:01	SHORT STOP CHAIN CHANGED, OVERLOAD PROTECTIONS REMOVED FROM SECURITY CHAIN.
	44173-41:01	S015 AND K30 ARE REMOVED.
	44173-42:01	FILTER IS STANDARD.
	44173-44:01	CONNECTIONS OF A104:04 AND :05 ARE CHANGED AND : 03 IS NEW.
	44172-46:01	M.B115 IS INTRODUCED.
	44173-50:01	P3 CONNECTION ARE CHANGED.
	44173-51:01	M.S65 AND M.S66 CONNECTION ARE CHANGED.
	44173-58:01	TERMINALS M.X35 CHANGED. CONN.ORDER TO K7 IS CHANGED.

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Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 981021 | Approved PGI | Date 981021 | Doc. class –

Machine: TBA/8-1000

Denomination: ALTERATION MESSAGES

Drawing No: 44173-99:50

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AM NO.	DRAWING-NO.	ALTERATIONS
20127	44173-59:01	TERMINALS M.X33, M.X34, X108, X109 ARE CHANGED.
	44173-60:01	CONNECTION ORDER CHANGED, DIODE IS INTRODUCED.
	44173-61:01	CONNECTION OF A115:12 IS ADDED.
	44173-62:01	CONNECTION OF A116:02, 03 ARE ADDED. :05 IS EXTRA EQUIPMENT.
	44173-63:01	CABLE W14 COLOURS ARE ADJUSTED. CONNECTION ORDER CHANGED.
	44173-65:01	K122 IS REMOVED.
	44173-66:01	TERMINALS M.X32, M.X33 AND X108 ARE CHANGED.
	44173-67:01	TERMINALS M.X34 AND X109 ARE CHANGED.
	44173-68:01	TERMINALS M.X35 AND M.X31 ARE CHANGED.
	44173-69:01	TERMINALS M.X31 AND X102 ARE CHANGED. M.Y32 IS REMOVED.
	44173-80:01	CONNECTION ORDER CHANGED.
	44173-81:01	CONNECTION ORDER CHANGED.
	44173-83:01	CONNECTIONS ORDER CHANGED.
	44173-84:01	CONNECTIONS ORDER CHANGED.
	44173-88:01	CONNECTIONS ORDER CHANGED.
	44173-89:01	CONNECTION ORDER CHANGED.
	44173-90:01	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-91:01	TERMINAL SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.

AM NO.	DRAWING-NO.	ALTERATIONS
	44173-92:01	TEXT X1 ADJUSTED.
	47745-00:01	PLC-PROGRAM INTRODUCED.
	52534-05:01	NEW DRAWING.
	52534-07:01	NEW DRAWING.
	52534-09:01	NEW DRAWING.
	52534-11:01	NEW DRAWING.
	52534-13:01	NEW DRAWING.
	52534-15:01	NEW DRAWING.
	52534-16:01	NEW DRAWING.
	52534-17:01	NEW DRAWING.
	52534-20:01	NEW DRAWING.
	52534-22:01	NEW DRAWING.
	52534-24:01	NEW DRAWING.
	52534-26:01	NEW DRAWING.
	52534-28:01	NEW DRAWING.
	61334-40:01	SHIELD ARE REMOVED FROM THE DRAWING.
	61334-43:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-45:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM. CABLE NUMBER IS CHANGED, CABLE COLOURS ARE ADDED.
	61334-58:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-59:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-60:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.

Note	A				
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Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer: DBI | Date: 981021 | Approved: PGI | Date: 981021 | Dec. class: -

Machine: TBA/8-1000

Denomination: ALTERATION MESSAGES

Drawing No: 44173-99:50

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AM NO.	DRAWING-NO.	ALTERATIONS
20127	61334-65:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-66:01	CABLE COLOURS ARE CHANGED.
	61334-71:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-72:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-73:01	EARTH IS ADDED TO TERMINAL M.X004.
	61334-74:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61334-75:01	CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	61335-05:01	MAIN VOLTAGE IS CHANGED.
	61335-06:01	TEXT STYLE IS CHANGED ON THE DESCRIPTION.
	573375-0001	MAGNETIC SETTING FOR COMPRESSOR AND PEROXIDE PUMP ARE CHANGED.
	573375-0002	TEXT, MAIN SWITCH IS ADJUSTED.
	573378	BALLONS 5 AND 6 ARE CHANGED.
	573380	END SUPPORT REMOVED. MESUREMENTS, CHANGED. LENGHT RAIL CORRECTED.
	575976	XL.1:9-14 ARE ADDED. LENGHT RAIL, CORRECTED.
	927280	NEW DRAWING.

AM NO.	DRAWING-NO.	ALTERATIONS
20588	CE-67035-100V	-POSITION A004 REMARK IS REMOVED. -POSITION A004:1 IS ADDED. -POSITION Z101 IS REMOVED. -POSITION 005 SIGN 90194/112 IS REPLACED BY 90194/133.
	44173-02:01	NEW EDITION DUE TO THE ECN.
	44173-05:01	Z101 CONNECTION IN TERMINAL 14 IS MOVED IN 12.
	44173-11:01	Q14 CONNECTION REFERENCE IS ADDED
	44173-12:01	CONNECTION ORDER BETWEEN A002:42 - X003:28 - A003:42 IS CHANGED
	44173-13:01	Q30 CONNECTION REFERENCE IS ADDED
	44173-21:01	K22 CONTACT IS CHANGED FROM NORMAL OPEN TO NORMAL CLOSED
	44173-33:01	CONNECTION TO A004:21 IS REMOVED
	44173-35:01	K18 CONTACT 1-2 CHANGED TO 13-14
	44173-40:01	Q30 AND Q14 AUXILIARY CONTACTS ARE ADDED IN THE OVERLOAD PROTECTION CHAIN,PIN DESIGNATIONS IN M.B70:1-:4 ARE CORRECTED
	44173-42:01	S006:2 CORRECTED TO S006
	44173-43:01	CADEX ATTRIBUTES IN TERMINALS X102:9-:11 ARE CORRECTED
	44173-47:01	PIN DESIGNATIONS IN M.B99:1-:2 ARE CORRECTED
	44173-50:01	CONNECTIONS FOR M.X060:63-64-66-67 ARE CORRECTED
	44173-58:01	K14 CONTACT REFERENCES ARE CORRECTED
	44173-60:01	K22 AND K15 CONTACT REFERENCES ARE CORRECTED
	44173-62:01	CONNECTION TO O16.04 IS REMOVED
	44173-63:01	P005 CONNECTION REFERENCE IS ADDED

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AM NO.	DRAWING-NO.	ALTERATIONS
20588	44173-90:01	LINE SUMMARY NEW EDITION ACCORDING TO CHANGES IN CIRCUIT DIAGRAM; LINES XL10,25 AND XL11,11 ARE CHANGED
	PLC PROGRAM	
	47745-02:01	CHANGED DUE TO PROGRAM CHANGES MENTIONED BELOW
	47745-03:01	NEW EDITION DUE TO PROGRAM CHANGES
	47745-04:01	K6 AND K7 ADDRESSES ARE CORRECTED
	CHANGED RUNGS:	
	RUNG 619	M07.13 IS REMOVED
	RUNG 620	BRANCH WITH M07.13 AND M06.07 IS ADDED
	RUNG 634	NEW RUNG IS ADDED
	RUNG 1709	I02.17 HAS BEEN REPLACED BY I02.14
	RUNG 1802	BRANCH WITH O16.04 HAS BEEN REMOVED
	RUNG 1805	O16.04 HAS BEEN REMOVED
	RUNG 1807	RUNG WITH OUTPUT O16.04 HAS BEEN REMOVED
	RUNG 1808	RUNG WITH OUTPUT O16.04 HAS BEEN REMOVED
	RUNG 1907	BRANCH WITH M17.13 HAS BEEN REMOVED
	RUNG 1909	NEW RUNG IS ADDED
	RUNG 2112	BRANCH WITH M16.04 AND D106 IS ADDED
	RUNG 2117	M06.07 IS ADDED IN THE FIRST BRANCH
	RUNG 2118	M14.07 IS ADDED
	RUNG 2144	NEW RUNG IS ADDED
	RUNG 2145	NEW RUNG IS ADDED
	RUNG 2146	NEW RUNG IS ADDED
	RUNG 2147	NEW RUNG IS ADDED
	RUNG 2148	NEW RUNG IS ADDED
	RUNG 2149	NEW RUNG IS ADDED
	RUNG 2503	O21.04 IS ADDED
	RUNG 2505	O21.04 IS ADDED
	RUNG 5106	D96 IS ADDED
	52534-11:01	POSITIONS 005 , 0020 AND PLC DISKETTE BOX ARE ADDED
	61334-21:01	M.B006 SYMBOL HAS BEEN CORRECTED
	61334-28:01	CONNECTION FOR EXTERNAL EMERGENCY STOP IS CHANGED
	61334-43:01	PIN DESIGNATIONS IN M.B99:1-:2 ARE CORRECTED
	61334-57:01	PIN DESIGNATIONS IN M.B70:1-:4 ARE CORRECTED
	61334-59:01	BRIDGE CONNECTION IN M.X017:50 , IS CHANGED TO M.X017:51
	61334-60:01	CORE 28 IS CONNECTED TO X106:4
	61334-65:01	TERMINAL P.X005:1 REPLACED BY P.X005:2
	927280	TERMINAL BLOCK X10 IS CHANGED POSITION :8 IS ADDED,POSITION :7 QUANTITY IS CHANGED.TERMINAL NUMBER 12-14-11 OF Z101 ARE ADDED.
20667	FOR CHANGES IN THE LISTS SEE ECN APPENDIX	
	44173-32:02	X103:4 CONNECTION REFERENCE IS CHANGED FROM A111:05 TO X111:05
	44173-68:02	DRAWING REMARK HAS BEEN DELETED
	PLC PROGRAM	
	47745-02:02	CHANGED DUE TO PROGRAM CHANGES MENTIONED BELOW
	47745-03:02	NEW VOLUME 1000 CC SQUARE IS INTRODUCED
	47745-04:02	CORRECTIONS IN THE ADDRESSES
	CHANGED RUNGS:	
	RUNG 635	NEW BRANCH WITH M00.05 AND M10.00 IS ADDED
	RUNG 654	M10.00 ADDED IN THE FIRST BRANCH
	RUNG 1012	IN THE SECOND BRANCH C0012.1 IS REMOVED, M00.00 AND M00.07 ARE ADDED.
	RUNG 1805	M06.07 IS ADDED
	RUNG 2149	NEW BRANCH WITH M11.05 IS ADDED
	RUNG 2314	I06.01 IS REMOVED AND M14.16 IS ADDED
	RUNG 2315	NEW RUNG
	RUNG 2403	NEW RUNG
	RUNG 2422	NEW RUNG
	RUNG 2423	THE RUNG IS REMOVED

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Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-99:50				Page 4/11

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AM NO.	DRAWING-NO.	ALTERATIONS
20667	RUNG 2425	NEW RUNG
	RUNG 2426	NEW RUNG
	RUNG 2804	M11.11 AND M06.07 ADDED IN A BRANCH BEFORE M06.14
	RUNG 2906	BRANCH WITH M00.07 , M04.04 , M06.12 AND M07.17 IS REMOVED
	RUNG 5217	BRANCH WITH O15.04 AND M11.17 IS ADDED AFTER C0016.1
	RUNG 5316	BRANCH WITH M11.13 IS ADDED
	61334-49:02	DRAWING REMARK 1 IS ADDED
	61334-53:02	M.X030:53 CONNECTION REFERENCE HAS BEEN CORRECTED
	61334-80:02	DRAWING REMARK IS REMOVED
	575811	POS.:3 QUANTITY IS CHANGED
	927280	POS.:2,:5,:8,PART NUMBERS ARE CHANGED
22757	FOR CHANGES IN THE LISTS SEE ECN APPENDIX	
	PLC PROGRAM	
	47745-02:03	CHANGED DUE TO PROGRAM CHANGES MENTIONED BELOW
	CHANGED RUNGS:	
	RUNG 2118	OUTPUT BRANCH WITH M15.04,GET K00025 AND DV034 IS ADDED,IN THE FIRST OUTPUT BRANCH M15.04 IS ADDED
	RUNG 2426	C0003.1 IS ADDED
	927280	POS.:5 PART NUMBER IS CHANGED

AM NO.	DRAWING-NO.	ALTERATIONS
22813	44173-99:03	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING THIS ECN.
	47745-03:02	VOLUME 500CC RUNG 1820, VALUE K0012 CHANGED TO K0036
22843	FOR CHANGES IN THE LISTS SEE ECN APPENDIX	
	44173-02:18	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM
	44173-06:18	DRAWING REMARK 2 IS REMOVED
	44173-08:18	X001 TERMINAL NUMBERS ARE CHANGED
	44173-09:18	X001 TERMINAL NUMBERS ARE CHANGED
	44173-10:18	X001 TERMINAL NUMBERS ARE CHANGED, M.X015 HAS BEEN REMOVED
	44173-11:18	X001 TERMINAL NUMBERS ARE CHANGED
	44173-12:18	X001 TERMINAL NUMBERS ARE CHANGED, SHIELDED CABLE IS INTRODUCED FOR DC MOTORS, DRAWING REMARKS ARE ADDED
	44173-13:18	X001 AND M.X030 TERMINAL NUMBERS ARE CHANGED, X006 IS ADDED SHIELDED CABLE IS INTRODUCED FOR M.M011, DRAWING REMARKS ARE ADDED
	44173-14:18	X001 TERMINAL NUMBERS ARE CHANGED
	44173-15:18	X001 TERMINAL NUMBERS ARE CHANGED
	44173-19:18	W018 AND W019 ARE ADDED
	44173-20:18	W020 AND W021 ARE ADDED
	44173-21:18	W022 AND W023 ARE ADDED
	44173-22:18	W024 AND W025 ARE ADDED
	44173-23:18	W026 IS ADDED
	44173-36:18	K113 IS ADDED
	44173-68:18	CONNECTION REFERENCE HAS BEEN ADDED
	44173-68:18	M.Y90 AND M.Y91 ARE ADDED
	44173-90:18	LINE SUMMARY NEW EDITION ACCORDING TO CIRCUIT DIAGRAM: LINES L30 AND L31 ARE CHANGED
	44173-91:18	TERMINAL SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM

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Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-99:50			Page 5/11

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AM NO.	DRAWING-NO.	ALTERATIONS
22843	44173-92:02	RECTIFIER V001 HAS BEEN MOVED FROM TERMINAL 32 TO 64, CONNECTIONS TO A002 AND A003 ARE REMOVED
	PLC PROGRAM	
	47745-02:03	CHANGED DUE TO PROGRAM CHANGES MENTIONED BELOW
	47745-03:18	VOLUME 750 CC IS INTRODUCED, S00.05 VALUE IS CHANGED FOR VOLUME 500S
	CHANGED RUNGS:	
	RUNG 1802	BRANCH WITH M06.07 AND M11.11 IS REMOVED, M00.00 IS REMOVED, O17.11 IS CHANGED TO LATCH
	RUNG 1803	NEW RUNG
	RUNG 1804	NEW RUNG
	RUNG 2110	M14.05 AND M14.07 ARE ADDED
	RUNG 2153	NEW RUNG
	RUNG 2154	NEW RUNG
	RUNG 2155	NEW RUNG
	RUNG 2156	NEW RUNG
	RUNG 5112	I02.11 AND O16.01 ARE REMOVED, M11.02 AND O15.00 ARE ADDED
	52534-05:18	X006 AND K113 ARE ADDED
	52534-11:18	DRAWING REMARKS ARE CHANGED
	52534-14:18	NEW DRAWING
	52534-15:18	RACK DESIGNATION IS CHANGED FROM A004:2 TO 0030. DRAWING REMARK 2 IS ADDED
	52534-16:18	Y90 AND Y91 ARE ADDED, DRAWING REMARKS ARE CHANGED
	61334-06:18	X001 TERMINAL NUMBERS ARE CHANGED, SHIELD INTRODUCED IN CABLE 400
	61334-07:18	X001 TERMINAL NUMBERS ARE CHANGED
	61334-08:18	X001 AND M.X030 TERMINAL NUMBERS ARE CHANGED, SHIELD ADDED IN CABLES 120 AND 320
	61334-09:18	CABLE 301 HAS BEEN REMOVED, SCREEN IS ADDED IN CABLE 701, X001 AND M.X60 TERMINAL NUMBERS ARE CHANGED
	61334-10:18	X001 TERMINAL NUMBERS ARE CHANGED, M.X015 HAS BEEN REMOVED
	61334-44:18	COLOURS ARE CHANGED IN CABLES 756 AND 755
	61334-75:18	M.Y090 AND M.Y091 ARE ADDED
	1143955	NEW TERMINAL BLOCK
	1143956	TERMINAL 24 IS ADDED
	1143957	TERMINAL BLOCK IS CHANGED DUE TO THE SHIELDED CABLE INTRODUCTION
	1143964	TERMINALS 67-68 AND 69-70 ARE CHANGED
70003	44173-02:21	NEW VERSION DUE TO CORRECTIONS
	44173-50:21	CONNECTION BETWEEN M.B066:1 AND M.X060:62 IS REMOVED
	44173-90:21	NEW VERSION DUE TO CORRECTIONS
	44173-91:21	NEW VERSION DUE TO CORRECTIONS
	PLC PROGRAM	
	47745-02:21	CHANGED DUE TO PROGRAM CHANGES MENTIONED BELOW
	47745-03:21	VALUES IN RUNGS 1903 AND 1904 ARE CHANGED FOR VOLUME 500CC SLIM. D064 IN RUNG 2153 IS ADDED AS VOLUME DEPENDENT VALUE.

Note	A				
ECN No.	71972				
Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 981021 | Approved PGI | Date 981021 | Doc. class –

Machine: TBA/8-1000

Denomination: ALTERATION MESSAGES

Drawing No: 44173-99:50

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.

AM NO.	DRAWING-NO.	ALTERATIONS
70003	CHANGED RUNGS:	
	RUNG 1319	I07.07 AND I07.04 ARE REMOVED, M12.07 IS ADDED
	RUNG 2153	NEW RUNG
	RUNG 2154	NEW RUNG
	RUNG 2155	NEW RUNG
	RUNG 2156	NEW RUNG
	RUNG 2157	NEW RUNG
	RUNG 2158	NEW RUNG
	RUNG 2159	NEW RUNG
	RUNG 2160	NEW RUNG
	RUNG 2161	NEW RUNG
	RUNG 2162	NEW RUNG
	52534-30:21	NEW DRAWING
	61334-44:21	BK WIRE IS REMOVED FROM CABLE 756
	1143957	POS.7 IS MOVED FROM TERMINAL 57 TO 58
70175	FOR CHANGES ON LIST SEE ECN APPENDIX	
	44173-99:22	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN
	PLC PROGRAM	
	47745-02:22	LIST OF ADDRESSES IS CHANGED ACCORDING TO THE CHANGES IN THE PROGRAM
	CHANGED RUNGS:	
	RUNG 1319	M12.07 IS CHANGED FROM ON CONTACT TO OFF CONTACT
	RUNG 2153	D064 IS MOVED BEFORE M12.13
	RUNG 2157	T0007.0 IS INTRODUCED

AM NO.	DRAWING-NO.	ALTERATIONS
70577	FOR CHANGES ON LIST SEE ECN APPENDIX	
	44173-99:28	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN
	PLC PROGRAM	
	47745-02:28	LIST OF ADDRESSES IS CHANGED ACCORDING TO THE CHANGES IN THE PROGRAM
	CHANGED RUNGS:	
	RUNG 1004	M00.03 IS ADDED
70684	FOR CHANGES ON LIST SEE ECN APPENDIX	
	44173-02:30	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-05:30	ADDED GENERAL REMARKS.
	44173-32:30	EMERG.STOP ON D.E.SIGN.,M.X30:102,103,104, 105 AND X103:12,13,14,15 ADDED.
	44173-35:30	CHANGED PIN NUMBERS ON K101;CHANGED CONN.REF ON K101AND K102.
	44173-37:30	ADDED REF.EM.STOP D.E.SIGN. BETWEEN X107:9,8 AND X001:366,368.
	44173-38:30	ADDED A CONTACT OF K101 IN THE X1-X2 CHAIN.
	44173-45:30	RENAMED MB044:1 TO MB044;REMOVED M.B044:2 ADDED REFERENCE M.X030:54 AND 55.
	44173-52:30	NEW PAGE
	44173-53:30	NEW PAGE
	44173-58:30	PIN NUMBERS ON K101 CONTACTS CHANGED.

Note	A				
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Tetra Pak

Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class –	
Machine TBA/8-1000	Denomination ALTERATION MESSAGES				
Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-99:50			Page 7/11	

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AM NO.	DRAWING-NO.	ALTERATIONS
	44173-90:30	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-91:30	TERMINAL SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-92:30	Z100 AND Z101 ADDED TO X002:1 LINE.
	44173-99:30	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	PLC PROGRAM	
	47745-02:30	LIST OF ADDRESSES IS CHANGED ACCORDING TO THE CHANGES IN THE PROGRAM.
	CHANGED RUNGS:	
	RUNG 2106	I04.12 CHANGED WITH PARALLEL OF I04.12, I10.00 OPEN CONTACTS AND I04.12,I10.00 CLOSE CONTACTS.
	RUNG 2144	ADDED IN PARALLEL TO I04.12 A OPEN CONT.OF I10.00.
	RUNG 2153	REMOVED.
	RUNG 2154	REMOVED.
	RUNG 2155	REMOVED.
	RUNG 2156	REMOVED.
	RUNG 2157	REMOVED.
	RUNG 2158	REMOVED.
	RUNG 2159	REMOVED.
	RUNG 2160	REMOVED.
	RUNG 2161	REMOVED.
	RUNG 2162	O15.13,D67,M12.15 CHANGED WITH M12.02, M02.05 AND M06.10 CLOSE CONT.;M12.17 CLOSE CONT.CHANGED WITH OPEN CONT OF I04.12; M12.17 OPEN CONT. CHANGED WITH I10.00.

AM NO.	DRAWING-NO.	ALTERATIONS
	52534-05:30	A110 ADDED AND REMOVED REMARK FROM R900.
	52534-09:30	A110 ADDED.
	52534-13:30	F901 REMOVED.
	52534-16:30	B44:1 RENAMED B44.
	52534-17:30	B44:2 RENAMED B52.
	52534-28:30	ADDED CABLE REMARK 356 ON BOX M.X30.
	61334-49:30	EM.STOP PLE ADDED;CABLE 356 ADDED; CABLE 355:35 DISCONNECTED FROM M.X030:100
	61334-53:30	CONNECTION BETWEEN X104:13 AND CABLE 355:13 MOVED FROM PAGE 54;CABLE 355:13 CONNECTED TO M.X30:53;JUMPER REMOVED; M.B044:1 RENAMED M.B044.
	61334-54:30	CONNECTION BETWEEN X104:13 AND 355:13 REMOVED;CONNECTION TO M.X030:56 CHANGED FROM 13 TO35;JUMPER BETWEEN M.X030:56 AND 53 REMOVED;M.B44:2 RENAMED M.B052.
	1296001-0000	FUSE PANEL LABEL, REPLACE OLD 573375; F900 AND F901 REMOVED.
70775	FOR CHANGES ON LISTS, SEE ECN APPENDIX. THE BIGGEST MODIFICATION ARE DUE TO ELECTRICAL RESTRUCTURING, ACCORDING TO "R/3 BILL OF MATERIAL RESTRUCTURING GUIDELINE". ISSUE 96/10/11.	
	44173-02:32	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.

Note	A				
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Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 981021 | Approved PGI | Date 981021 | Doc. class –

Machine: TBA/8-1000

Denomination: ALTERATION MESSAGES

Drawing No: 44173-99:50

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AM NO.	DRAWING-NO.	ALTERATIONS
70775	44173-36:32	K113 FITTED ON STANDARD MACHINE AND REMOVED DRAWING REMARK.
	44173-69:32	K113 CONTACTS FITTED ON STANDARD MACHINE.
	44173-90:32	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-91:32	TERMINAL SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-99:32	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	52534-05:32	REMOVED DRAWING REMARK FROM K113.
	573378,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	575810,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	575811,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	575976,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	577430-0000	REMOVED BECAUSE NOT NECESSARY IN NEW EM.
	577452-0001	REMOVED BECAUSE NOT NECESSARY IN NEW EM.
	927280,AD	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.

AM NO.	DRAWING-NO.	ALTERATIONS
	1143955,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	1143956,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	1143957,AC	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	1143964,AB	THE TABLE WITH THE MATERIAL LIST ON THE BOTTOM OF THE DRWING HAS BEEN REMOVED DUE TO THE ELECTRICAL RESTRUCTURING.
	1296409,AA	REPLACED OLD 1296001-0001
	1296412,AA	REPLACED OLD 1296001-0002
71023	FOR CHANGES ON LISTS, SEE ECN APPENDIX	
	44173-02:36	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM
	44173-09:36	X002:32 CHANGED TO X002:68 ACCORDING TO CIRCUIT DIAGRAM 44173-92:36
	44173-12:36	REMOVED P001 AND ITS CONNECTION TO THE AUX. CONTACTS OF K23,K124,K109
	44173-29:36	NEW RECORDER P002 INTRODUCED.
	44173-35:36	CONNECTIONS REFERENCE OF K023 CHANGED
	44173-58:36	ADD TO THE CONNECTION REFERNCE OF K104 THE SHEET 29.

Note	A				
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Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class -
Machine TBA/8-1000	Denomination ALTERATION MESSAGES			
Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-99:50			Page 9/11

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AM NO.	DRAWING-NO.	ALTERATIONS
	44173-61:36	SHEET REFERENCES FOR A004:22 CHANGED TO sh.33.
	44173-64:36	ADD TO THE CONNECTIONS REFERENCE OF K109 THE SHEET 29.
	44173-65:36	K124 HAS BEEN REMOVED FROM A117:12.
	44173-90:36	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-91:36	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-92:36	REMOVED P001 FROM X002:37.
	44173-99:36	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	PLC PROGRAM	
	47745-01:36	BLOCK 26 RENAMED 6+4 CHANNELS RECORDER
	47745-02:36	LIST OF ADDRESSES IS CHANGED ACCORDING TO THE CHANGES IN THE PROGRAM.
	CHANGED RUNGS:	
	RUNG 2321	REMOVED RUNG
	RUNG 2602	PARALLEL BRANCH ADDED WITH M11.17, M13.02 AND D69.
	RUNG 2605	ADDED IN PARALLEL TO M12.12 A OPEN CONTACT OF I03.03.
	52534-05:36	K124 AND P001 REMOVED. DRAWING REMARK REMOVED FROM P002.
	52534-09:36	P001 REMOVED AND P002 ADDED.
	52534-11:36	P002 DRAWING REMARK REMOVED. P001 REMOVED.
	52534-16:36	DRAWING REMARK TO MB82:1 ADDED, T4 ADDED, M31 RENAMED M13.
	52534-17:36	DRAWING REMARK TO MB82:2 ADDED, T4 REMOVED, M31 RENAMED M13.
	61334-34:36	M.M031 RENAMED M.M013.
	61334-49:36	OLD PLE DENOMINATION CHENGED TO DE DENOMINATION.
	61334-75:36	M.Y071 COMMENT HAS BEEN CORRECTED.
	61335-05:36	UPPER LINE CHANGED TO "MAIN VOLTAGE 205-600V EXCEPT 400/230V" NOT 380/220

AM NO.	DRAWING-NO.	ALTERATIONS
	573378,AC	NEW DIPOSITION OF THE BALLOONS.
	575976,AC	NEW DIPOSITION OF THE BALLOONS.
	1296409,AB	SETTING OF Q3 AND Q11 CHANGED ACCORDING TO NEW OVERLOAD PKZMO.
	1296412,AB	SETTING OF Q2 CHANGED ACCORDING TO NEW OVERLOAD PKZMO. CHANGED POSITION OF F550.
71182	FOR CHANGES ON LISTS, SEE ECN APPENDIX	
	44173-02:37	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-20:37	NOTE P002:1:15 CHANGED TO P002:9 AND NOTE P002:1:14 CHANGED TO P002:8.
	44173-22:37	NOTE P002:1:13 CHANGED TO P002:6 AND NOTE P002:1:12 CHANGED TO P002:5.
	44173-25:37	NOTE P002:1:11 CHANGED TO P002:3 AND NOTE P002:1:10 CHANGED TO P002:2.
	44173-58:37	NO CHANGES ON THE EL. DRAWING ONLY TO UPDATE THE POSITION SUMMARY.
	44173-61:37	NO CHANGES ON THE EL. DRAWING ONLY TO UPDATE THE POSITION SUMMARY.
	44173-90:37	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-91:37	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-99:37	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	61334-44:37	CABLE 360: SPARE WIRE 26 ADDED.
	61334-65:37	CABLE 354: SPARE WIRE 12 REMOVED.
	1296409,AC	THERMAL SETTING CHANGED ACCORDING TO NEW OVERLOAD PKZMO.
	1296412,AC	THERMAL SETTING CHANGED ACCORDING TO NEW OVERLOAD PKZMO.
71258	FOR CHANGES ON LISTS, SEE ECN APPENDIX	
	44173-90:39	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM.
	44173-99:39	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.

Note	A				
ECN No.	71972				
Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 981021 | Approved PGI | Date 981021 | Doc. class –

Machine: TBA/8-1000

Denomination: ALTERATION MESSAGES

Drawing No: 44173-99:50

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AM NO.	DRAWING-NO.	ALTERATIONS
71424	FOR CHANGES ON LISTS, SEE ECN APPENDIX	
	44173-02:43	POSITION SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM
	44173-35:43	K102 CONTACT REFERENCE CHANGED
	44173-38:43	CONTACT K102 HAS BEEN ADDED
	44173-90:43	LINE SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM (WIRES DIMENSION CORRECTED)
	44173-91:43	TERMINAL SUMMARY CHANGED ACCORDING TO CIRCUIT DIAGRAM
	44173-99:43	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	47745-04:43	MACHINE OPERATIONS DIAGRAM CORRECTED
	61334-21:43	EARTH TERMINAL ADDED BETWEEN X001:224 AND X001:225
		CABLE 380 HAS BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-22:43	CABLES 359 AND 376 HAVE BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-43:43	CABLE 760 HAS BEEN CHANGED FROM 16x0,75 TO 12x0,75
		EARTH WIRE ADDED FOR CABLE 763
		CABLES 764 AND 765 HAVE BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-44:43	CABLE 360 HAS BEEN CHANGED FROM 27x0,75 TO 25x0,75
	61334-45:43	EARTH CONNECTION ADDED
	61334-46:43	CABLES 250 AND 251 HAVE BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-49:43	CABLE 355 HAS BEEN CHANGED FROM 36x0,75 TO 41x0,75
	61334-53:43	CABLES 158, 385, 169, HAVE BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-55:43	CABLE 342 HAS BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-57:43	CABLES 456, 457, 458, 459 HAVE BEEN CHANGED FROM 2x0,75 TO 3x0,75
	61334-60:43	CABLE 480 HAS BEEN CHANGED FROM 36x0,75 TO 34x0,75
	575810,AC	EARTH TERMINAL ADDED BETWEEN X001:224 AND X001:225

AM NO.	DRAWING-NO.	ALTERATIONS
71972	FOR CHANGES ON LISTS, SEE ECN APPENDIX	
	44173-99:50	ALTERATION MESSAGES DOCUMENT IS UPDATED ACCORDING TO THIS ECN.
	47745-03:50	NEW VOLUME 500 CC Sq. INTRODUCED. RUNG 2153 WITH D064 REMOVED.
	61334-20:50	RED AND YELLOW PART ON CABLE 453 CHANGED ON M.X039.
	61334-21:50	EARTH WIRE OF 380 CABLE REMOVED FROM M.B006.
	61334-22:50	EARTH WIRE OF 376 CABLE REMOVED FROM M.B085.
	61334-49:50	BRIDGE BETWEEN M.X030:90 AND M.X030:91 REMOVED.
		SPARE WIRES ON CABLE 355 CHANGED ON SIDE TO M.X030.
	61334-60:50	SPARE WIRES ON CABLE 480 CHANGED ON SIDE TO M.X017.

Note	A				
ECN No.	71972				
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Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 981021	Approved PGI	Date 981021	Dec. class -
Machine TBA/8-1000	Denomination ALTERATION MESSAGES			
Drawing No 44173-99:50				Page 11/11

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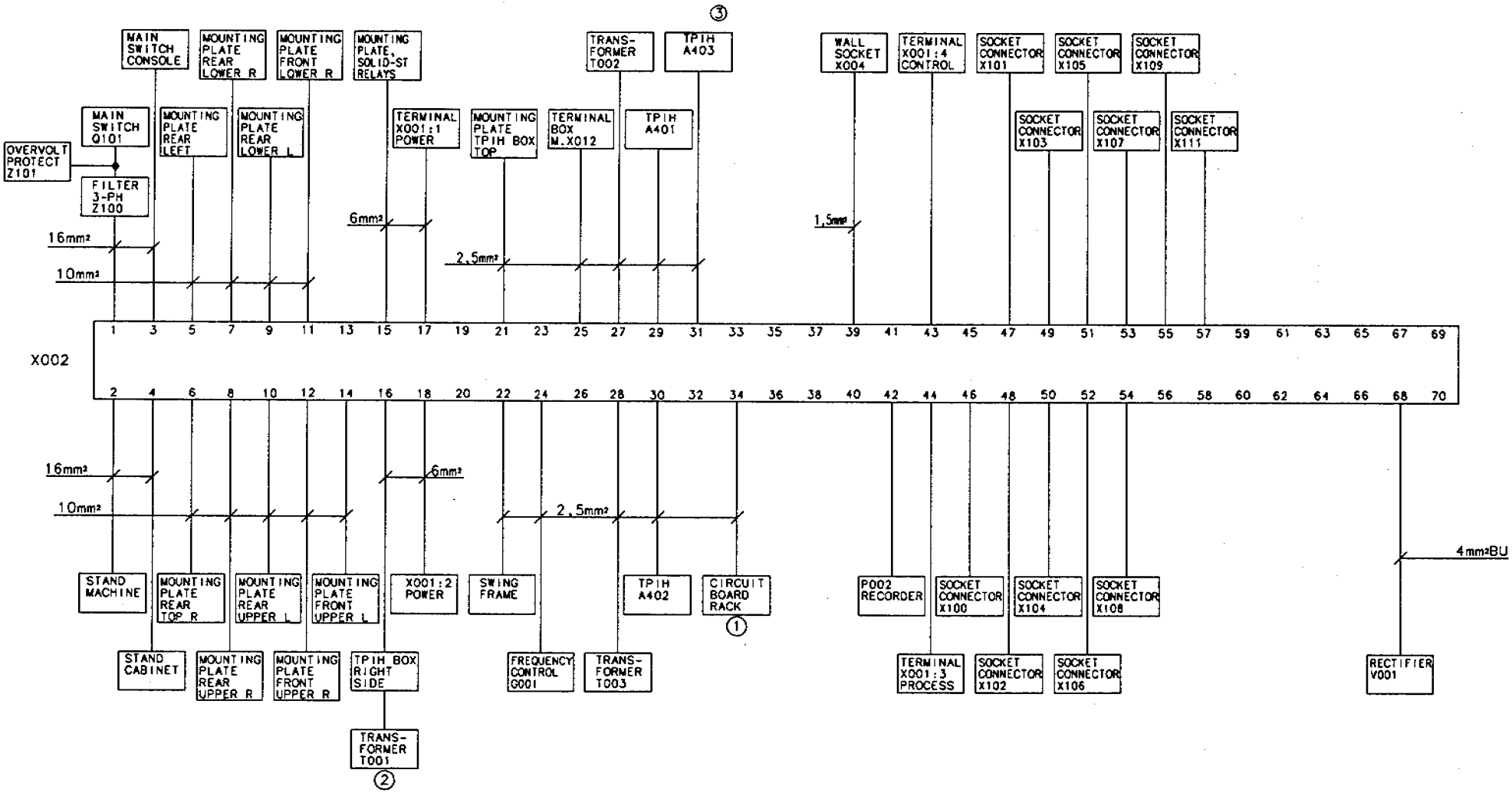

WIRE TYPE: ACCORDING TO TP US
WHERE NOTHING ELSE IS SAID: WIRE 0.75mm² GNYE

Rate	A				(1) STAR WASHERS IS TO BE PLACED BETWEEN RACK AND MOUNTING PLATE TO CREATE	Tetra Pak	Designer DBI	Date 970901	Approved DBI Date 970901	Doc. class -
ECN No.	71023				GOOD ELECTRIC CONTACT.		Machine TBA/8-1000	Denomination PROTECTIVE BONDING		
Sign./Date	DBI/970901				(2) THE EARTH WIRE SHALL ALSO BE CONNECTED TO SCREW BESIDE T001. NOTE:THE	Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-92:36			Page -
Appr./Date	DBI/970901				CABLE MUST NOT BE SPLICED Drawing remarks (3) EXTRA EQUIPMENT.					

Machine: 649171

ECN 71424 'O'
19980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
X.L001,1	35:43	X001,16	08:18	X001,46	13:18	X001,201	19:18
,2	35:43	,17	11:18	,47	13:18	,202	19:18
,3	35:43	,18	11:18	,48	13:18	,203	19:18
,4	35:43	,19	11:18	,49	15:18	,204	19:18
,5	35:43	,20	12:36	,50	15:18	,205	20:37
,6	35:43	,21	12:36	,51	15:18	,206	20:37
,7	35:43	,22	12:36	,52	11:18	,207	20:37
,8	35:43	,23	12:36	,53	11:18	,208	20:37
,9	60:01	,24	12:36	,54	11:18	,209	21:18
,10	60:01	,25	09:36	,55	11:18	,210	21:18
,11	35:43	,26	09:36	,56	11:18	,211	22:37
,12	35:43	,27	09:36	,57	10:18	,212	22:37
,13	36:32	,28	09:36	,58	10:18	,213	25:37
,14	36:32	,29	14:18	,59	12:36	,214	25:37
		,30	14:18	,60	12:36	,215	40:01
X001,1	07:01	,31	14:18	,61	12:36	,216	40:01
,2	07:01	,32	14:18	,62	12:36	,217	40:01
,3	07:01	,33	14:18	,63	12:36	,218	40:01
,4	07:01	,34	14:18	,64	08:18	,219	40:01
,5	07:01	,35	14:18	,65	08:18	,220	40:01
,6	07:01	,36	14:18	,66		,221	40:01
,7	07:01	,37	14:18	,67		,222	40:01
,8	07:01	,38	14:18	,68		,223	40:01
,9	07:01	,39	11:18	,69		,224	40:01
,10	07:01	,40	11:18	,70		,225	43:01
,11	07:01	,41	11:18	,71		,226	43:01
,12	07:01	,42	11:18	,72		,227	43:01
,13	08:18	,43	11:18	,73		,228	43:01
,14	08:18	,44	11:18	,74	10:18	,229	43:01
,15	08:18	,45	13:18	,75	10:18	,230	43:01

Machine: 649171

ECN 71424 'O'
9980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
X001,231		X001,351	31:01	X002,2		X002,33	
,232		,352	31:01	,3		,34	
,233	36:32	,353	31:01	,4		,35	
,234	36:32	,354	31:01	,5		,36	
,235	47:01	,355	31:01	,6		,37	
,236	47:01	,356		,7		,38	
,237	44:01	,357		,8		,39	
,238	44:01	,358		,9		,40	
,239	44:01	,359		,10		,41	
,240	22:37	,360		,11		,42	
,241	22:37	,361	31:01	,12		,43	
,242		,362	31:01	,13		,44	
,243		,363	40:01	,14		,45	
,244		,364	40:01	,15		,46	
,245		,365	37:30	,16		,47	
,246		,366	37:30	,17		,48	
,247		,367	37:30	,18		,49	
,248		,368	37:30	,19		,50	
,249		,369		,20		,51	
,250		,370	30:01	,21		,52	
,251		,371	30:01	,22		,53	
,252	33:01	,372	30:01	,23		,54	
,253	33:01	,373	30:01	,24		,55	
,254	33:01	,374	30:01	,25		,56	
,255	33:01	,375	30:01	,26		,57	
,256	33:01	,376	30:01	,27		,58	
,257	33:01	,377	30:01	,28		,59	
,258	33:01	,378		,29		,60	
,259	33:01			,30		,61	
,350	31:01	X002,1	05:30	,31		,62	

Machine: 649171

ECN 71424 'O'
19980313 SJR

Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
X002,63		M.X004,2	10:18	X010,6	05:30	M.X012,19	51:01
,64		,3	10:18	,7	05:30	,20	51:01
,65		,4	10:18	,8		,21	51:01
,66		,5	10:18	,9	05:30	,22	51:01
,67		,6	10:18	,10	05:30	,23	51:01
,68	09:36	,7	10:18	,11	05:30	,24	51:01
,69		,8	10:18	,12		,25	51:01
,70		,9	63:01	,13	05:30	,26	51:01
		,10	63:01	,14	05:30	,27	21:18
X003,N	05:30	,11	63:01	,15	05:30	,28	21:18
,1		,12	63:01	,16			
,2		,13	63:01			M.X017,1	47:01
,3	06:18	,14	63:01	M.X012,1	08:18	,2	47:01
,4	06:18	,15	63:01	,2	08:18	,3	47:01
,5	08:18	,16	43:01	,3	13:18	,4	47:01
,6	08:18	,17	43:01	,4	13:18	,5	47:01
,7				,5	13:18	,6	47:01
,8	08:18	P.X005,2	33:01	,6	08:18	,7	47:01
,22	12:36			,7	08:18	,8	47:01
,23	08:18	X006,1	13:18	,8	37:30	,9	47:01
,25	10:18			,9	37:30	,10	47:01
,26	09:36	X007,1	10:18	,10	37:30	,11	47:01
,27	13:18	,2	10:18	,11	37:30	,12	47:01
,28	12:36	,3	10:18	,12	51:01	,13	40:01
,29	09:36			,13	51:01	,14	40:01
,31		X010,1	05:30	,14	37:30	,15	
,114	11:18	,2	05:30	,15	37:30	,16	40:01
,123		,3	05:30	,16	37:30	,17	40:01
		,4		,17	37:30	,18	
M.X004,1	10:18	,5	05:30	,18	51:01	,19	40:01

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Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
M.X017,20	40:01	M.X017,50	46:01	M.X030,1	13:18	M.X030,52	45:30
,21		,51	46:01	,2	13:18	,53	45:30
,22	40:01	,52	27:01	,3	13:18	,54	52:30
,23	40:01	,53	27:01	,4	13:18	,55	52:30
,24		,54	27:01	,5	15:18	,56	52:30
,25	47:01	,55	27:01	,6	15:18	,57	45:30
,26	47:01	,56	27:01	,7	11:18	,58	45:30
,27	47:01	,57	28:01	,8	11:18	,59	45:30
,28	46:01	,58	28:01	,9	11:18	,60	45:30
,29	46:01	,59	69:32	,30	28:01	,61	45:30
,30	46:01	,60	69:32	,31	28:01	,62	45:30
,31	46:01	,61	69:32	,32	28:01	,63	45:30
,32	46:01	,62	69:32	,33	27:01	,64	45:30
,33	46:01	,63		,34	27:01	,65	45:30
,34	46:01	,64		,35	27:01	,66	45:30
,35	46:01	,65		,37	40:01	,67	45:30
,36	46:01	,66		,38	40:01	,68	45:30
,37	47:01	,67	69:32	,39	44:01	,69	45:30
,38	47:01	,68	69:32	,40	44:01	,70	45:30
,39	47:01	,69	46:01	,41	44:01	,71	45:30
,40	46:01	,70	46:01	,42		,72	
,41	46:01	,71	46:01	,43	45:30	,73	
,42	46:01	,72	46:01	,44	45:30	,74	
,43	46:01	,73	46:01	,45	67:01	,75	67:01
,44	46:01	,74	46:01	,46		,76	
,45	46:01			,47	67:01	,77	67:01
,46	46:01	M.X023,1	10:18	,48	58:37	,78	
,47	46:01	,2	10:18	,49		,79	
,48	46:01	,3	10:18	,50	58:37	,80	
,49	46:01			,51	45:30	,81	

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Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
M.X030,82		M.X031,6-	69:32	M.X034,1	67:01	M.X035,6-	69:32
,83		,7	69:32	,1-	67:01	,7	68:18
,84		,7-	69:32	,2	59:01	,7-	68:18
,85				,2-	59:01	,8	33:01
,86		M.X032,1	66:01	,3	67:01	,8-	33:01
,87		,1-	66:01	,3-	67:01	,9	68:18
,88		,2	66:01	,4	67:01	,9-	68:18
,89		,2-	66:01	,4-	67:01	,10	58:37
,90		,3	66:01	,5	67:01	,10-	58:37
,91		,3-	66:01	,5-	67:01		
,92	32:30	,4	66:01	,6	33:01	M.X036,1	21:18
,93	32:30	,4-	66:01	,6-	33:01	,2	21:18
,94	32:30	,6	66:01	,7	67:01		
,95	32:30	,6-	66:01	,7-	67:01	M.X037,1	21:18
,96	32:30	,7	66:01	,8	33:01	,2	21:18
,97	32:30	,7-	66:01	,8-	33:01		
,98	32:30			,9	33:01	M.X038,1	20:37
,99	32:30	M.X033,1	59:01	,9-	33:01	,2	20:37
,100		,1-	59:01				
,101		,3	59:01	M.X035,1	68:18	M.X039,1	20:37
,102	32:30	,3-	59:01	,1-	68:18	,2	20:37
,103	32:30	,4	59:01	,2	68:18		
,104	32:30	,4-	59:01	,2-	68:18	M.X040,1	19:18
,105	32:30	,5	59:01	,3	68:18	,2	19:18
		,5-	59:01	,3-	68:18		
M.X031,1	68:18	,6	66:01	,4	69:32	M.X041,1	08:18
,1-	68:18	,6-	66:01	,4-	69:32	,2	08:18
,2	36:32	,7	66:01	,5	68:18		
,2-	36:32	,7-	66:01	,5-	68:18	M.X044,1	08:18
,6	69:32			,6	69:32	,2	08:18

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Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
M.X045,1	08:18	M.X060,29	37:30	M.X060,59	50:19	X100,9	39:01
,2	08:18	,30	37:30	,60	50:19	,10	39:01
		,31	51:01	,61	50:19	,11	39:01
M.X046,1	43:01	,32	51:01	,62	50:19	,12	
,2	43:01	,33		,63	50:19	,13	
,3	43:01	,34		,64	50:19	,14	
,4	43:01	,35		,65	50:19	,15	
		,36	35:43	,66	50:19	,16	
M.X050,1	19:18	,37	35:43	,67	50:19	,17	
,2	19:18	,38	35:43	,68	50:19	,18	
		,39	47:01	,69	50:19	,19	
M.X055,1	22:37	,40	47:01	,70	50:19	,20	
,2	22:37	,41	35:43	,71	51:01	,21	
		,42	47:01	,72	51:01	,22	
M.X060,1		,43	47:01	,73	51:01	,23	
,2		,44		,74	51:01	,24	
,3		,45		,75	51:01		
,4		,46		,76	51:01	X101,1	50:19
,5		,47	50:19			,2	50:19
,6	08:18	,48	50:19	M.X061,1	25:37	,3	40:01
,7	08:18	,49	50:19	,2	25:37	,4	51:01
,20		,50	50:19			,5	37:30
,21	22:37	,51	50:19	X100,1	39:01	,6	37:30
,22	22:37	,52	50:19	,2	39:01	,7	37:30
,23	50:19	,53	50:19	,3	39:01	,8	37:30
,24	50:19	,54	50:19	,4	39:01	,9	51:01
,25	40:01	,55	50:19	,5	39:01	,10	51:01
,26	51:01	,56	50:19	,6	39:01	,11	35:43
,27	37:30	,57	50:19	,7	39:01	,12	35:43
,28	37:30	,58	50:19	,8	39:01	,13	35:43

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Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
X101,14	35:43	X102,21		X103,23		X105,3	40:01
,15	47:01	,22		,24		,4	47:01
,16	50:19	,23				,5	46:01
,17	50:19	,24		X104,1	27:01	,6	46:01
,18	50:19			,2	27:01	,7	46:01
,19	50:19	H.X102,1	22:37	,3	27:01	,8	46:01
,20	50:19	,2	22:37	,4	40:01	,9	46:01
,21	50:19			,5	40:01	,10	47:01
,22	50:19	X103,1		,6	44:01	,11	46:01
,23	51:01	,2		,7	45:30	,12	46:01
,24	51:01	,3	32:30	,8	44:01	,13	46:01
		,4	32:30	,9	45:30	,14	46:01
X102,1	68:18	,5	32:30	,10	45:30	,15	27:01
,2	36:32	,6	32:30	,11	67:01	,16	27:01
,4	69:32	,7	32:30	,12	58:37	,17	27:01
,5	69:32	,8	32:30	,13	45:30	,18	27:01
,7	36:32	,9	32:30	,14	45:30	,19	27:01
,8	69:32	,10	32:30	,15	45:30	,20	28:01
,9	43:01	,11	52:30	,16	45:30	,21	28:01
,10	43:01	,12	32:30	,17	45:30	,22	69:32
,11	43:01	,13	32:30	,18	45:30	,23	69:32
,12	43:01	,14	32:30	,19		,24	69:32
,13		,15	32:30	,20	28:01		
,14		,16		,21	28:01	X106,1	46:01
,15		,17		,22	28:01	,2	46:01
,16		,18		,23	67:01	,3	40:01
,17		,19		,24		,4	69:32
,18		,20				,5	
,19		,21		X105,1	47:01	,6	
,20		,22		,2	47:01	,7	

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Position	Sheet	Position	Sheet	Position	Sheet	Position	Sheet
X106,8		X107,14		X108,21	63:01	X111,2	37:30
,9		,15		,22	43:01	,3	37:30
,10		,16		,23	43:01	,4	37:30
,11		,17		,24		,5	40:01
,12		,18				,6	40:01
,13		,19		X109,1	67:01	,7	40:01
,14		,20		,2	59:01	,8	40:01
,15		,21		,3	67:01	,9	
,16		,22		,4	67:01	,10	
,17		,23		,5	67:01	,11	
,18		,24		,6	33:01	,12	
,19				,7	67:01	,13	
,20		X108,1	66:01	,8	33:01	,14	
,21		,2	66:01	,9	33:01	,15	
,22		,3	66:01	,11	67:01	,16	
,23		,4	66:01	,12	67:01	,17	
,24		,6	66:01	,13	68:18	,18	
		,7	66:01	,14	68:18	,19	
X107,1	17:01	,8	66:01	,15	68:18	,20	
,2	17:01	,9	59:01	,16	69:32	,21	
,3	29:36	,10	66:01	,17	68:18	,22	
,4	33:01	,11	59:01	,18	69:32	,23	
,6	37:30	,13	59:01	,19	68:18	,24	
,7	37:30	,14	59:01	,20	33:01		
,8	37:30	,15	59:01	,21	68:18		
,9	37:30	,16	66:01	,22	58:37		
,10		,17	66:01	,23	68:18		
,11		,18	63:01	,24	68:18		
,12		,19	63:01				
,13		,20	63:01	X111,1	37:30		

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Line	Position	Sheet	Area	Colour	Line	Position	Sheet	Area	Colour
L10	XL10,1		4	BU		K110,10	64:36		
	V001,-	09:36				K111,10	64:36		
	X002,68	09:36				K112,10	60:01		
						K121,10	65:36		
L10	XL10,2		0,75	BU		K125,10	65:36		
	A401,212	06:01				K126,10	65:36		
						K127,10	65:36		
L10	XL10,3		0,75	BU		K128,10	36:32		
	A402,212	06:01							
					L10	XL10,8		0.75	BU
L10	XL10,4		0,75	BU		K005,A1	60:01		
	A403,212	06:01							
					L10	XL10,9		0,75	BU
L10	XL10,5		0.75	BU		K013,A1	35:43		
	P003,4	50:19				K015,A1	60:01		
	P004,-	35:43				K016,A1	62:01		
	P005,2	63:01				K018,A1	60:01		
	A006,18	34:01				K019,A1	61:37		
						K022,A1	60:01		
L10	XL10,6		0,75	BU		K023,A1	35:43		
	K202,4	36:32				K017,A1	62:01		
	R202,2	36:32							
					L10	XL10,10		0,75	BU
L10	XL10,7		0,75	BU		X.L001,2	35:43		
	K101,14	35:43				,4	35:43		
	K102,10	35:43				,6	35:43		
	K105,10	64:36				,8	35:43		
	K106,10	64:36				,10	60:01		
	K108,10	64:36				,14	36:32		
	K109,10	64:36							

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Line	Position	Sheet Area Colour	Line	Position	Sheet Area Colour
L10	XL10,11	0.75 BU		X108,8	66:01
	G001,3	13:01		,10	66:01
	A004,2	33:01		,21	63:01
	A002,25	12:36			
	A003,25	12:36	L10	XL10,17	0,75 BU
				X109,11	67:01
L10	XL10,12	0,75 BU		,12	67:01
	K050,A1	32:30		,23	68:01
	K051,A1	32:30		,24	68:01
	X001,234	36:32			
	,237	44:01	L10	XL10,18	0,75 BU
	,253	33:01		X102,7	36:32
	,257	33:01		,8	69:32
	M.X012,18	51:01			
	,21	51:01	L10	XL10,20	0.75 BU
	,24	51:01		A102,B2	41:01
				A103,B2	43:01
L10	XL10,13	0,75 BU		K020,A1	35:43
	X100,9	39:01			
	A101,B2	39:01	L10	XL10,21	0.75 BU
				A104,B2	45:30
L10	XL10,14	0,75 BU		A105,B2	47:01
	X105,5	46:01			
	,22	69:32	L10	XL10,22	0.75 BU
				A106,B2	49:01
L10	XL10,15	0,75 BU		A107,B2	51:01
	X101,17	50:19			
	X104,10	45:30	L10	XL10,24	0,75 BU
				A115,B1	61:37
L10	XL10,16	0,75 BU		A110,B2	53:30

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Line	Position	Sheet	Area	Colour	Line	Position	Sheet	Area	Colour
L10	XL10,25		0,75	BU		A208,23	22:37		
	A117,B1	65:36							
	A116,B1	63:01			L11	XL11,3		0,75	BU
	P006,4	63:01				A213,23	25:37		
L10	XL10,26		0.75	BU	L11	XL11,4		0,75	BU
	A120,B1	67:01				A301,15	27:01		
	A121,B1	69:32				A302,15	27:01		
						A303,15	27:01		
L10	XL10,28		0,75	BU		A304,15	28:01		
	X107,2	17:01				A305,15	28:01		
						A306,15	28:01		
L10	XL10,30		0.75	BU					
	G100,B1	17:01			L11	XL11,5		0,75	BU
						A401,214	06:01		
L10	XL10,31		0,75	BU					
	A012,33	37:30			L11	XL11,6		0,75	BU
	,A2	37:30				A402,214	06:01		
L11	XL11,1		4	BU	L11	XL11,7		0,75	BU
	F020,2	09:36				A403,214	06:01		
L11	XL11,2		0,75	BU	L11	XL11,8		0,75	BU
	A201,23	19:01				A401,228	06:01		
	A202,23	19:01							
	A203,23	20:37			L11	XL11,9		0,75	BU
	A204,23	20:37				A403,224	06:01		
	A205,23	21:01							
	A206,23	21:01			L11	XL11,10		0,75	BU
	A207,23	22:37				A401,224	06:01		

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Line	Position	Sheet	Area	Colour	Line	Position	Sheet	Area	Colour
L11	XL11,11		0.75	BU		K128,4	41:01		
	S004,13	42:01							
	S005,13	42:01			L11	XL11,18		0,75	BU
	S015,13	36:32				X001,376	30:01		
	S007,13	41:01				,361	31:01		
	S006,5	42:01				,352	31:01		
						,225	43:01		
L11	XL11,12		0,75	BU		,227	43:01		
	X104,7	45:30				,235	47:01		
	X102,9	43:01				,239	44:01		
	,11	43:01							
					L11	XL11,19		0.75	BU
L11	XL11,13		0,75	BU		A120,A1	66:01		
	X105,1	47:01				,A3	67:01		
	,7	46:01							
					L11	XL11,20		0.75	BU
L11	XL11,14		0,75	BU		A115,A1	60:01		
	X100,2	39:01				,A3	61:37		
	X108,22	43:01							
					L12	XL12,1		4	BU
L11	XL11,15		0,75	BU		F020,4	09:36		
	X101,1	50:19							
	X111,7	40:01			L12	XL12,2		0,75	BU
						A012,A1	37:30		
L11	XL11,16		0,75	BU		,13	37:30		
	X107,1	17:01				,23	37:30		
L11	XL11,17		0.75	BU	L12	XL12,3		0,75	BU
	A450,11	18:01				F050,LIV	36:32		
	A451,11	18:01				M.X012,12	51:01		

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Line	Position	Sheet Area Colour	Line	Position	Sheet Area Colour
L12	H.X012,20	51:01	L12	XL12,13	0.75 BU
	,23	51:01		G100,A1	17:01
	,26	51:01			
			L12	XL12,14	0,75 BU
L12	XL12,4	0,75 BU		K121,1	35:43
	K010,43	36:32			
	K013,13	33:01	L13	XL13,1	4 BU
	K018,13	35:43		F020,6	09:36
	K030,13	41:01			
	K104,6	35:43	L13	XL13,2	0,75 BU
	A004,1	33:01		Z102,RD	05:30
L12	XL12,5	0.75 BU	L20	XL20,1	0,75 BU
	A101,A2	39:01		A012,34	37:30
				A013,A2	38:43
L12	XL12,6	0,75 BU		,33	38:43
	Q001:1,13	40:01		K008,A1	35:43
				K009,A1	59:01
L12	XL12,8	0.75 BU		K010,A1	59:01
	A116,A1	62:01		K011,A1	59:01
	,A3	63:01		A114,B1	59:01
				X.L001,12	35:43
L12	XL12,9	0,75 BU		X108,9	59:01
	A117,A1	64:36			
	,A3	65:36	L21	XL21,1	0,75 BU
				A012,24	37:30
L12	XL12,10	0.75 BU		A013,A1	38:43
	A121,A1	68:01		A114,A3	59:01
	,A3	69:32		K128,7	35:43

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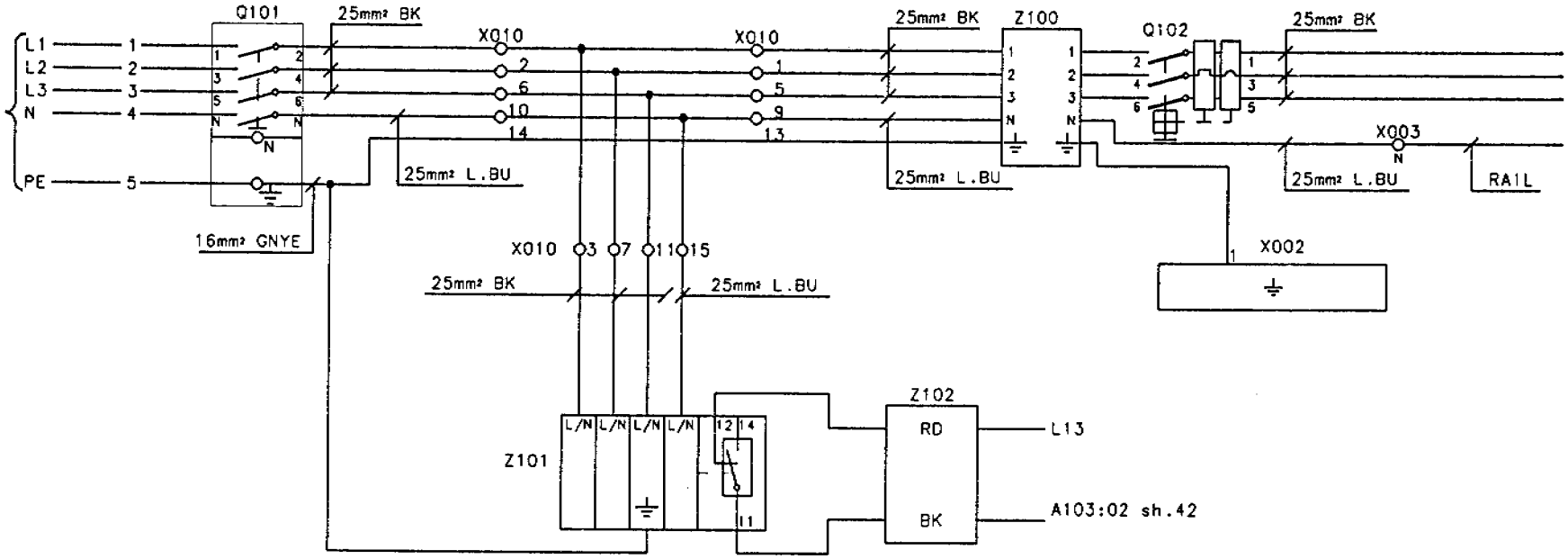
Line	Position	Sheet Area Colour	Line	Position	Sheet Area Colour
L30	XL30,1	0,75 BU	L50	XL50,3	0,75 RD
	K001,A1	58:37		A213,27	25:37
	K002,A1	58:37			
	K004,A1	58:37	L50	XL50,4	0,75 RD
	K006,A1	58:37		A301,A2	27:01
	K007,A1	58:37		A302,A2	27:01
	K012,A1	58:37		A303,A2	27:01
	K030,A1	38:43		A304,A2	28:01
	K014,A1	58:37		A305,A2	28:01
	K104,10	58:37		A306,A2	28:01
	K113,10	36:32			
	A013,34	38:43	L50	XL50,5	0,75 RD
				P002,L2/	29:36
L31	XL31,1	0,75 BU		P003,14	50:19
	A013,24	38:43			
	K113,2	36:32	L50	XL50,7	0,75 RD
	A114,A1	58:37		A401,130	06:01
L50	XL50,1	1,5 RD	L50	XL50,8	0,75 RD
	X003,22	12:36		A402,130	06:01
L50	XL50,2	0,75 RD	L50	XL50,9	0,75 RD
	A201,27	19:01		A403,130	06:01
	A202,27	19:01			
	A203,27	20:37	L50	XL50,11	0.75 BLUE
	A204,27	20:37		A450,A2	18:01
	A205,27	21:01		A451,A2	18:01
	A206,27	21:01			
	A207,27	22:37	L51	XL51,1	1,5 RD
	A208,27	22:37		F022,1	12:36

Machine: 649171

CN 71424 'O'
19980313 SJR

Line	Position	Sheet Area Colour	Line	Position	Sheet Area Colour
L51	K005,13	12:36		P003,12	50:19
L51	XL51,2	1,5 RD	L52	XL52,6	0,75 RD
	P002,L1	29:36		A401,126	06:01
L52	XL52,1	1,5 RD	L52	XL52,7	0,75 RD
	K005,14	12:36		A402,126	06:01
L52	XL52,2	0,75 RD	L52	XL52,8	0,75 RD
	A301,A1	27:01		A403,126	06:01
	A302,A1	27:01			
	A303,A1	27:01	L52	XL52,9	0.75 RD
	A304,A1	28:01		A450,A1	18:01
	A305,A1	28:01		A451,A1	18:01
	A306,A1	28:01			
L52	XL52,3	0,75 RD			
	A201,26	19:01			
	A202,26	19:01			
	A203,26	20:37			
	A204,26	20:37			
	A205,26	21:01			
	A206,26	21:01			
	A207,26	22:37			
	A208,26	22:37			
L52	XL52,4	0,75 RD			
	A213,26	25:37			
L52	XL52,5	0.75 RD			

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



FOR TYPE OF WIRE, WIRING INSTRUCTIONS ETC.
SEE SPECIFICATION FOR SUBSUPPLIERS TPUS 3502.22

WHERE NOTHING ELSE IS SAID
OR LINE SUMMARY IS VALID: 0.75mm2 BU
STAR OR BLUE MARKING IS USED
FOR SHOWING CONTINUOS WIRE.

Note	A				
ECN No.	70684				
Sign./Date	FRM/970314				
Appr./Date	FRM/970314				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM	Date 970314	Approved FRM	Date 970314	Doc. class –
Machine TBA/8-1000	Designation MAINS			
Drawing No 44173-05:30				Page –

Tetra Pak
LUND SWEDEN

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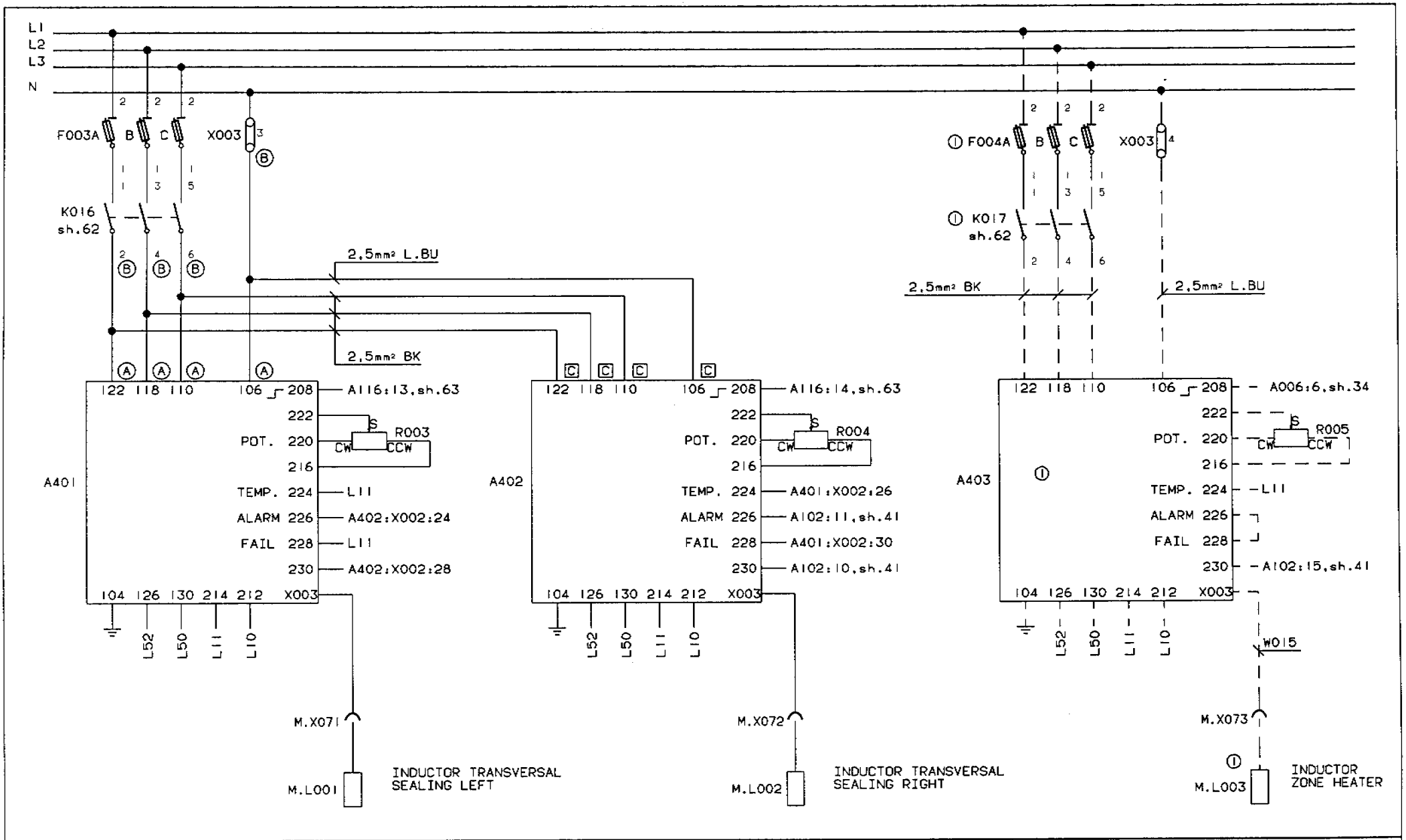

INTRODUCED WITH AM NO. 22843	DATE: 951128	SIGN PGI	① EXTRA EQUIPMENT	DESCRIPTION: IH-GENERATORS	
ISSUE					
AM NO					
DATE				MACHINE: TBA/8-100V	44173-06:18
SIGN			DRAWING REMARKS		

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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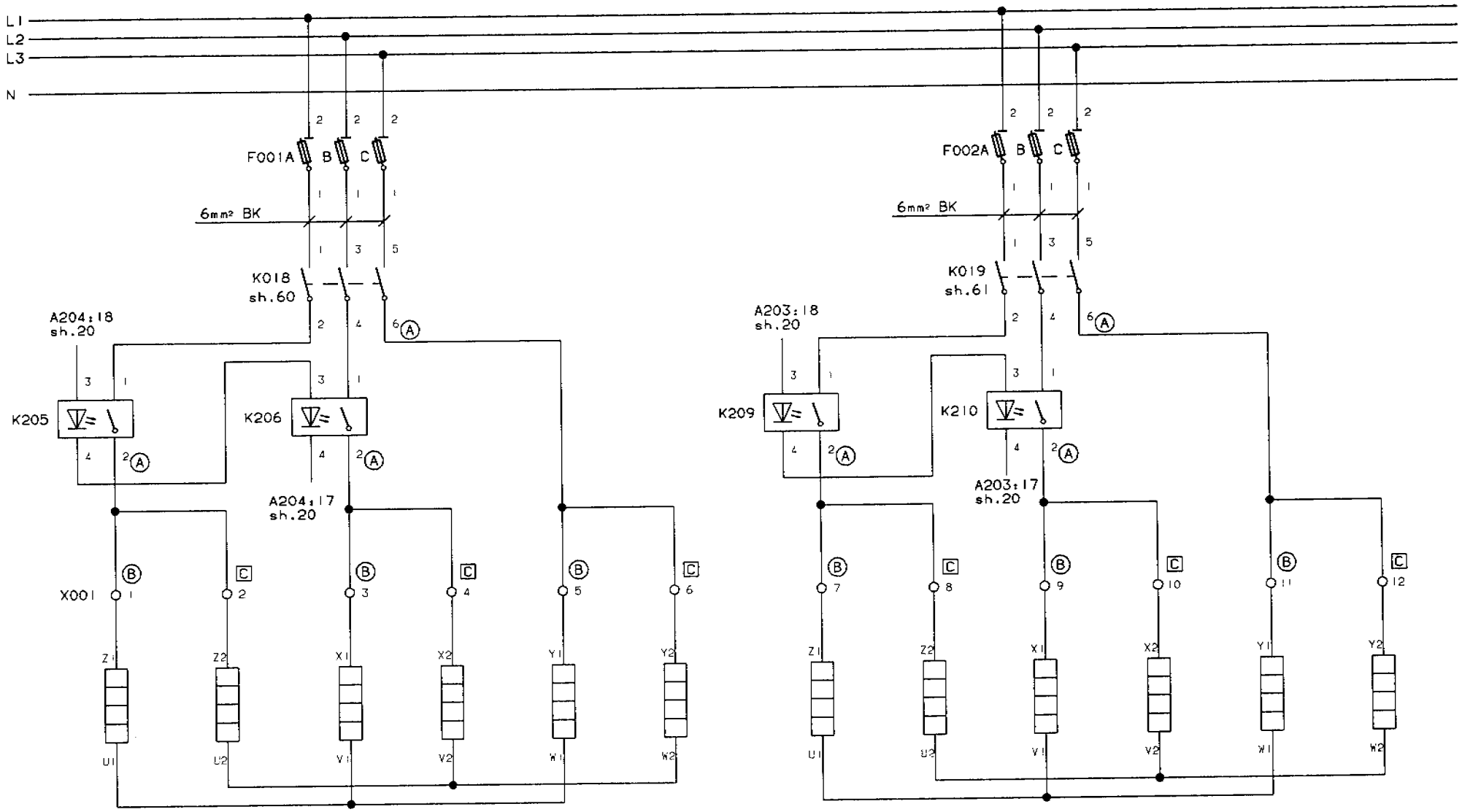

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JöB	DESCRIPTION: ELEMENTS	
ISSUE				MACHINE: TBA/8-100V	44173-07:01
AM NO.					
DATE				DRAWING REMARKS	
SIGN					

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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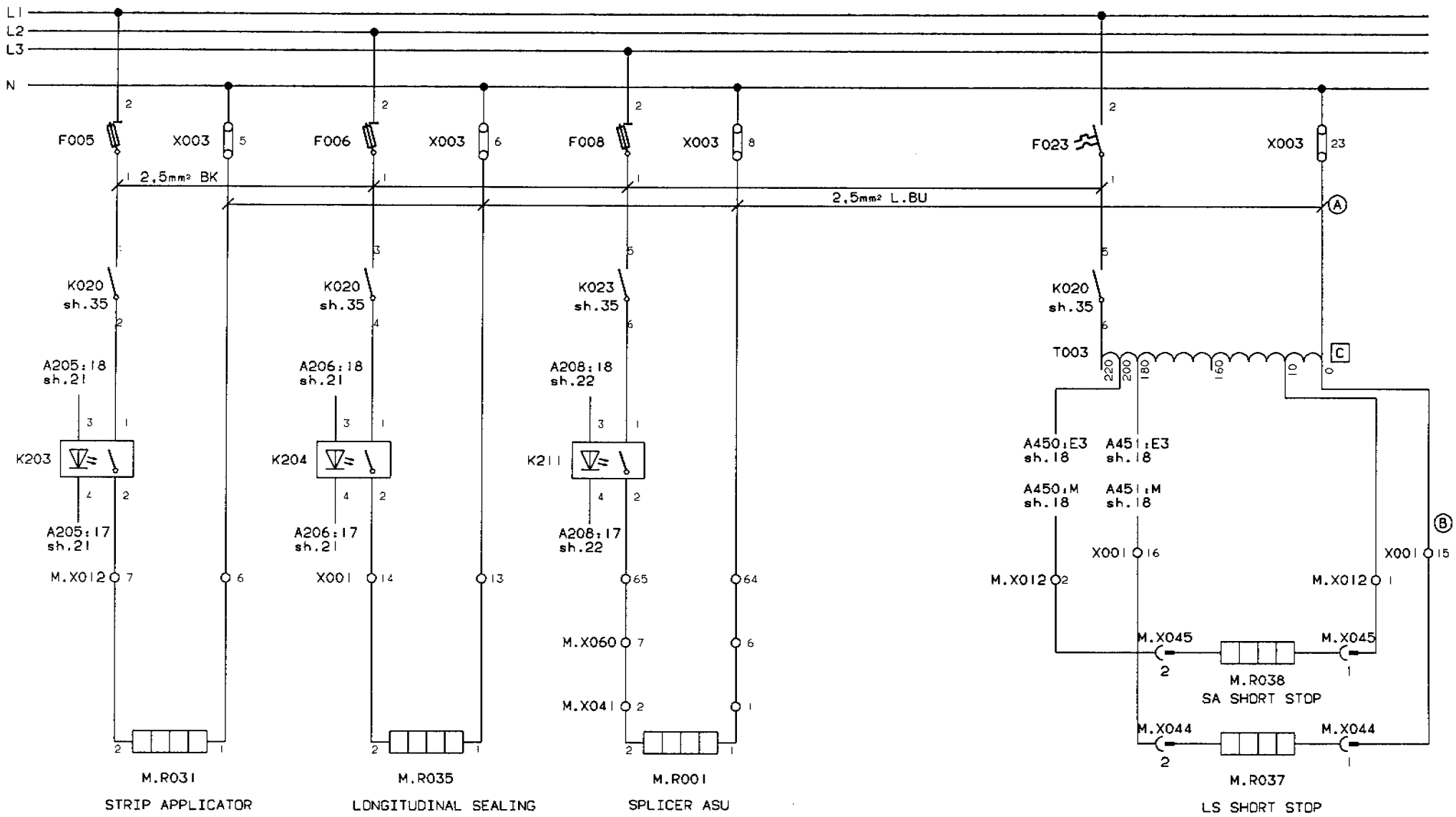
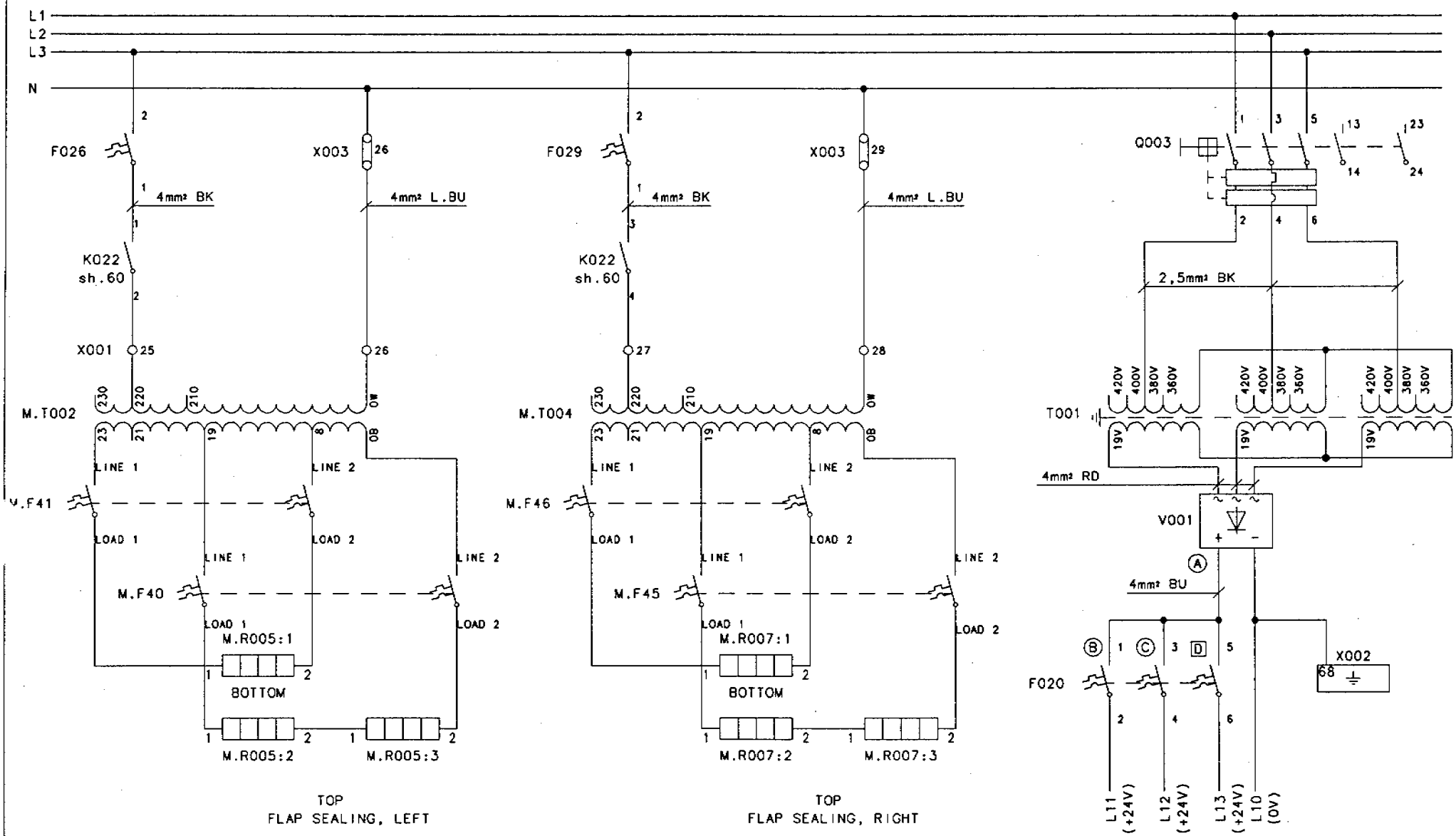


INTRODUCED WITH AM NO. 22843	DATE 951128	SIGN. PGI	DESCRIPTION: ELEMENTS
ISSUE			MACHINE: TBA/8-100V
AM NO			44173-08:18
DATE			
SIGN		DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

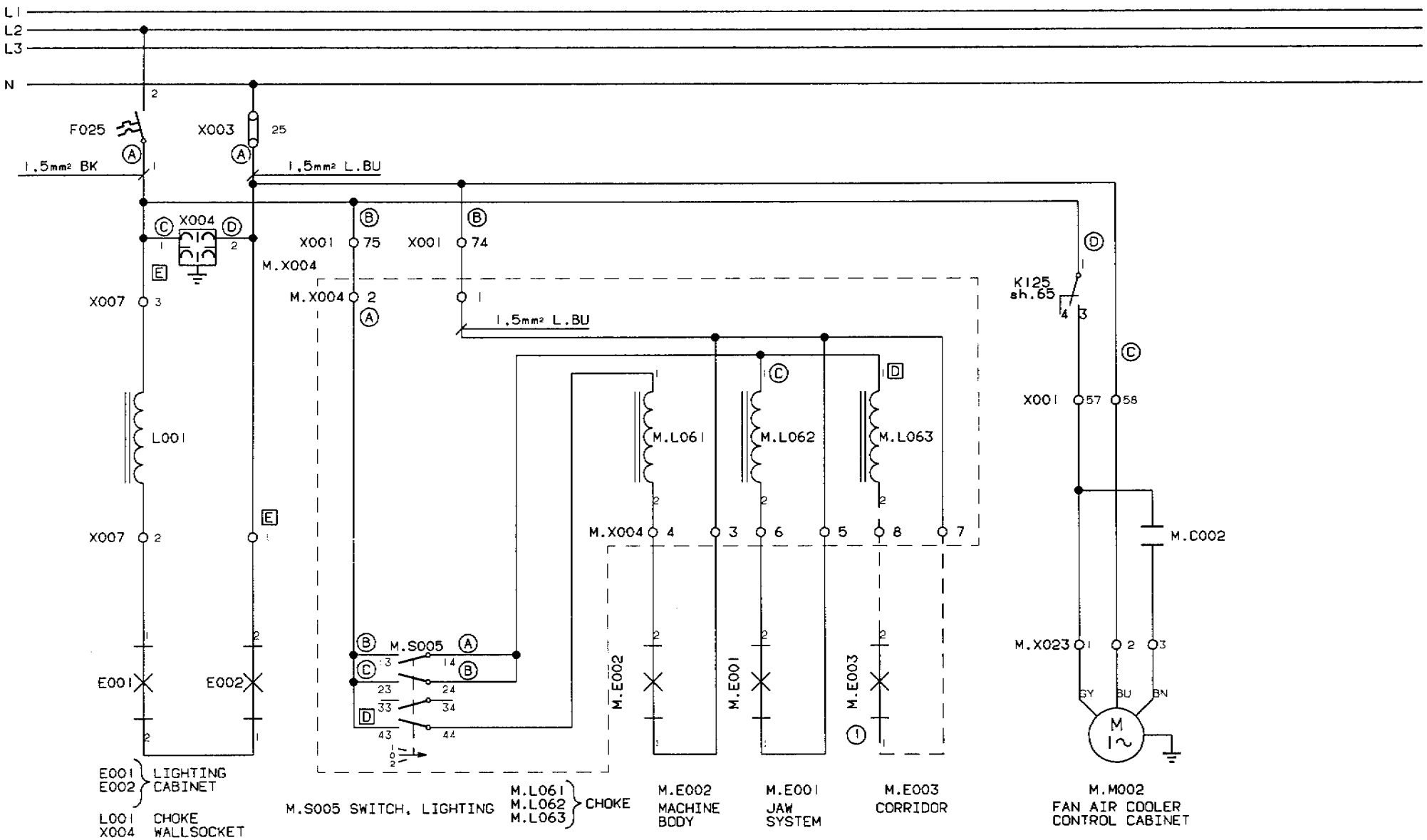
This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



Rate	A					Tetra Pak	Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
ECN No.	71023						Machine TBA/8-1000	Denomination ELEMENTS, CONTROL VOLTAGE		
Sign./Date	DBI/970901					Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-09:36			Page –
Appr./Date	DBI/970901				Drawing remarks					

Tetra Pak
LUND SWEDEN

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.



INTRODUCED WITH AM NO	22843	DATE: 951128	SIGN: PGI	① EXTRA EQUIPMENT	DESCRIPTION: LIGHT FIXTURES, FAN AIR COOLER
ISSUE					
AM NO					MACHINE: TBA/8-100V
DATE					44173-10:18
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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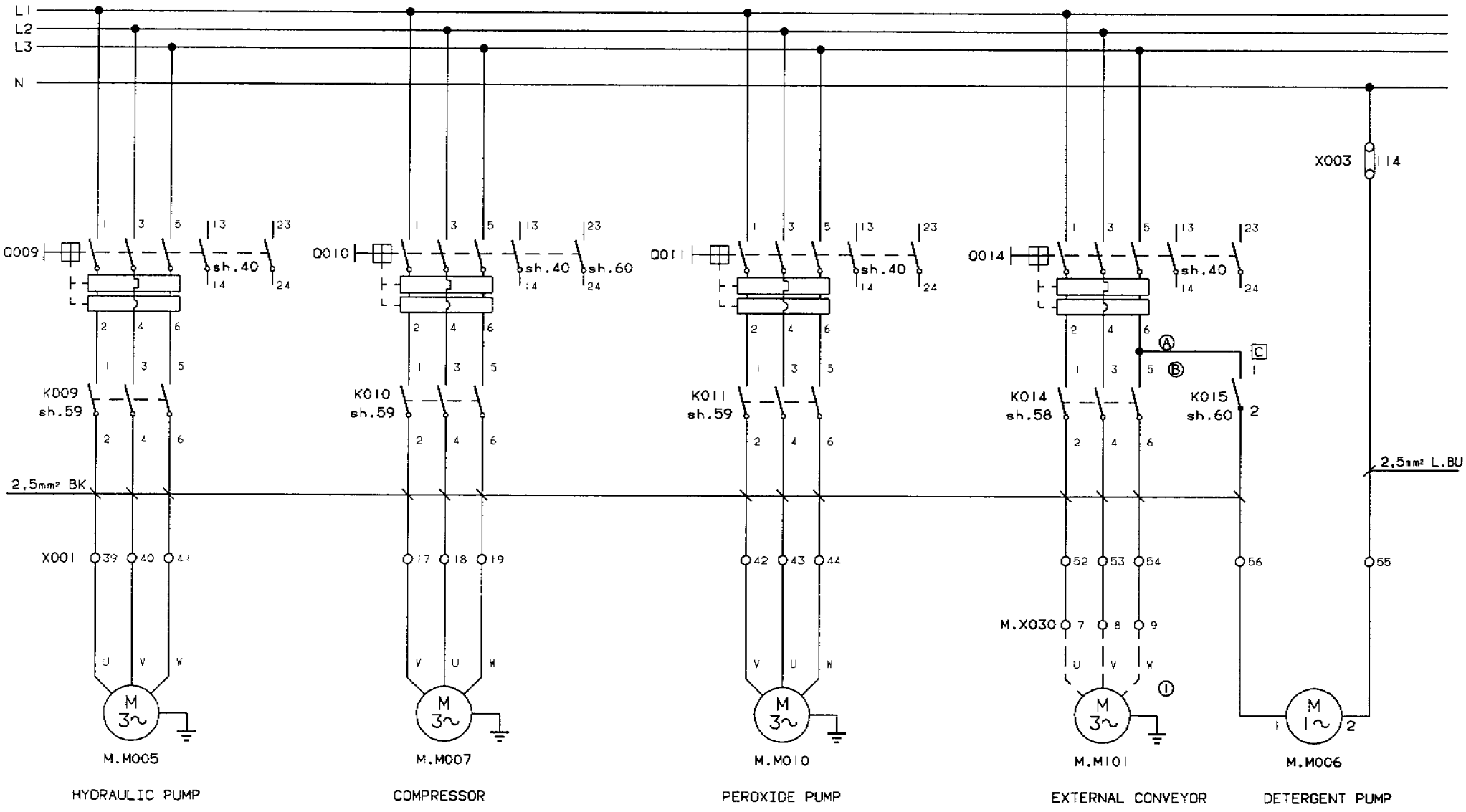

INTRODUCED WITH AM NO.	22843	DATE 951128	SIGN. PGI	① EXTRA EQUIPMENT	DESCRIPTION: MOTORS
ISSUE					MACHINE: TBA/8-100V
AM NO.					44173-11:18
DATE					
SIGN				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

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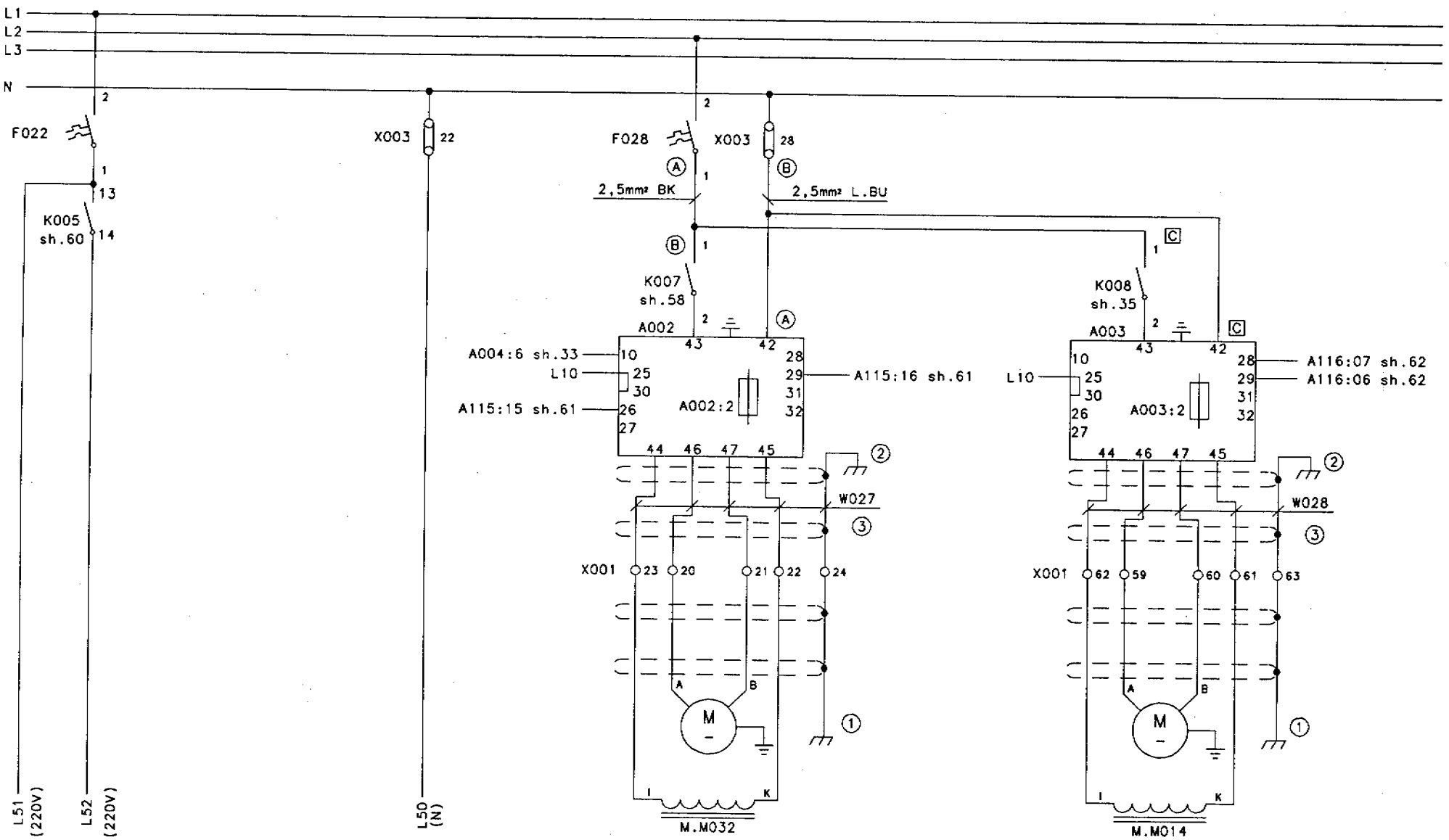


MOTOR BENDING ROLLER

UNREELING MOTOR, PAPER SUPPLY

Note	A				① MUST BE CONNECTED TO GROUND BY THE COMPRESSOR GLAND
ECR No.	71023				② MUST BE CONNECTED TO GROUND BY CLAMP 90220-302/304 ON THE RACK, SEE MOUNT.DRAWING 52534-14:18
Sign./Date	DBI/970901				③ YELL/GREEN IN THE CABLE MUST BE CONNECTED ON BOTH SIDES
Appr./Date	DBI/970901				Drawing remarks

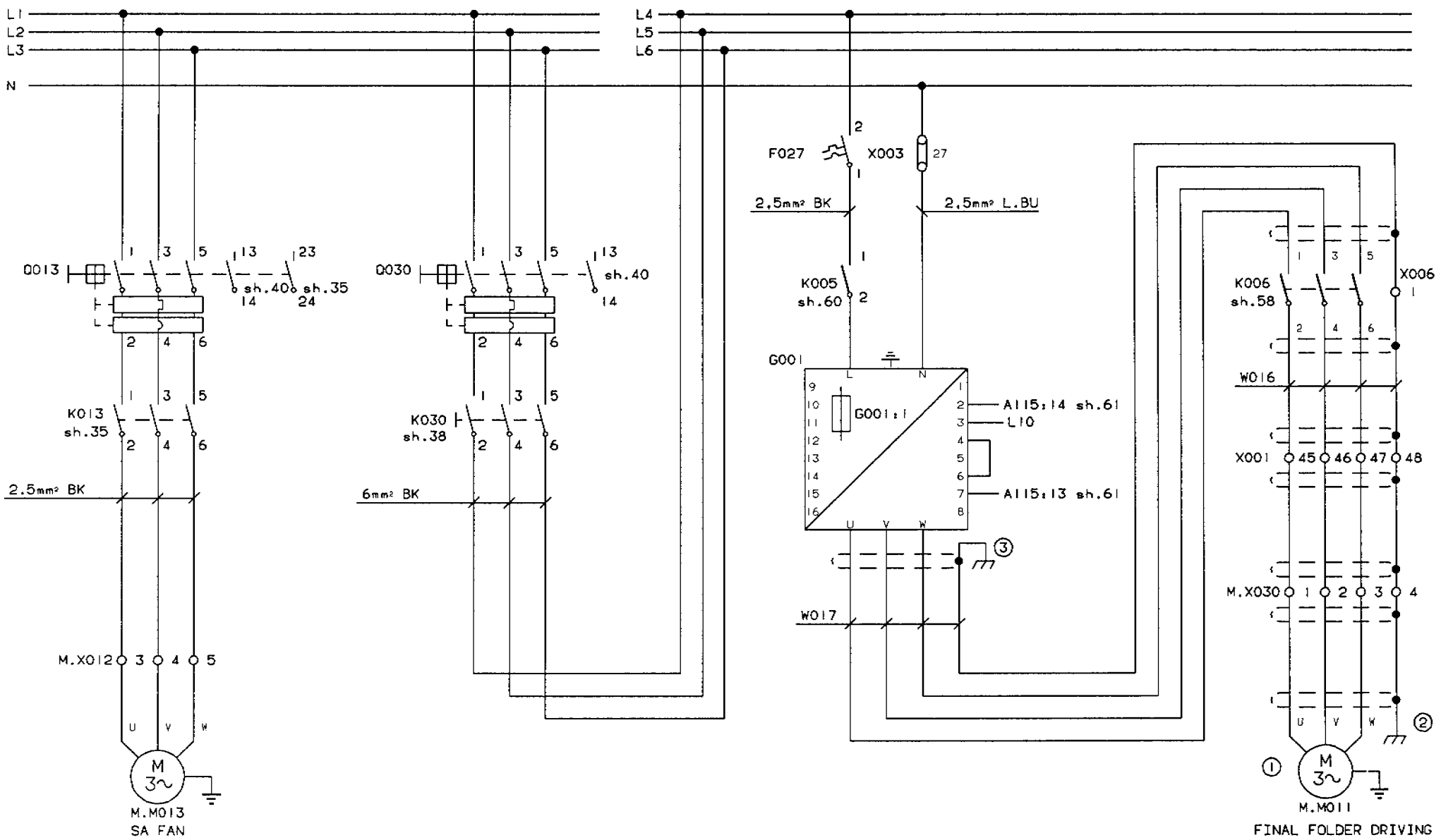
Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 970915	Approved DBI	Date 970915	Doc. class –
Machine TBA/8-1000	Denomination MOTORS			
Drawing No 44173-12:36				Page –

Tetra Pak
MODENA ITALY

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



INTRODUCED WITH AM NO. 22843	DATE: 951128	SIGN. PGI	① TO BE DELTA CONNECTED ② MUST BE CONNECTED TO GROUND BY THE COMPRESSOR GLAND ③ MUST BE CONNECTED TO GROUND BY THE WELDED BOLT NEAR G1
ISSUE			DRAWING REMARKS
AM NO			
DATE			
SIGN.			

DESCRIPTION: MOTORS

MACHINE: TBA/8-100V

44173-13:18

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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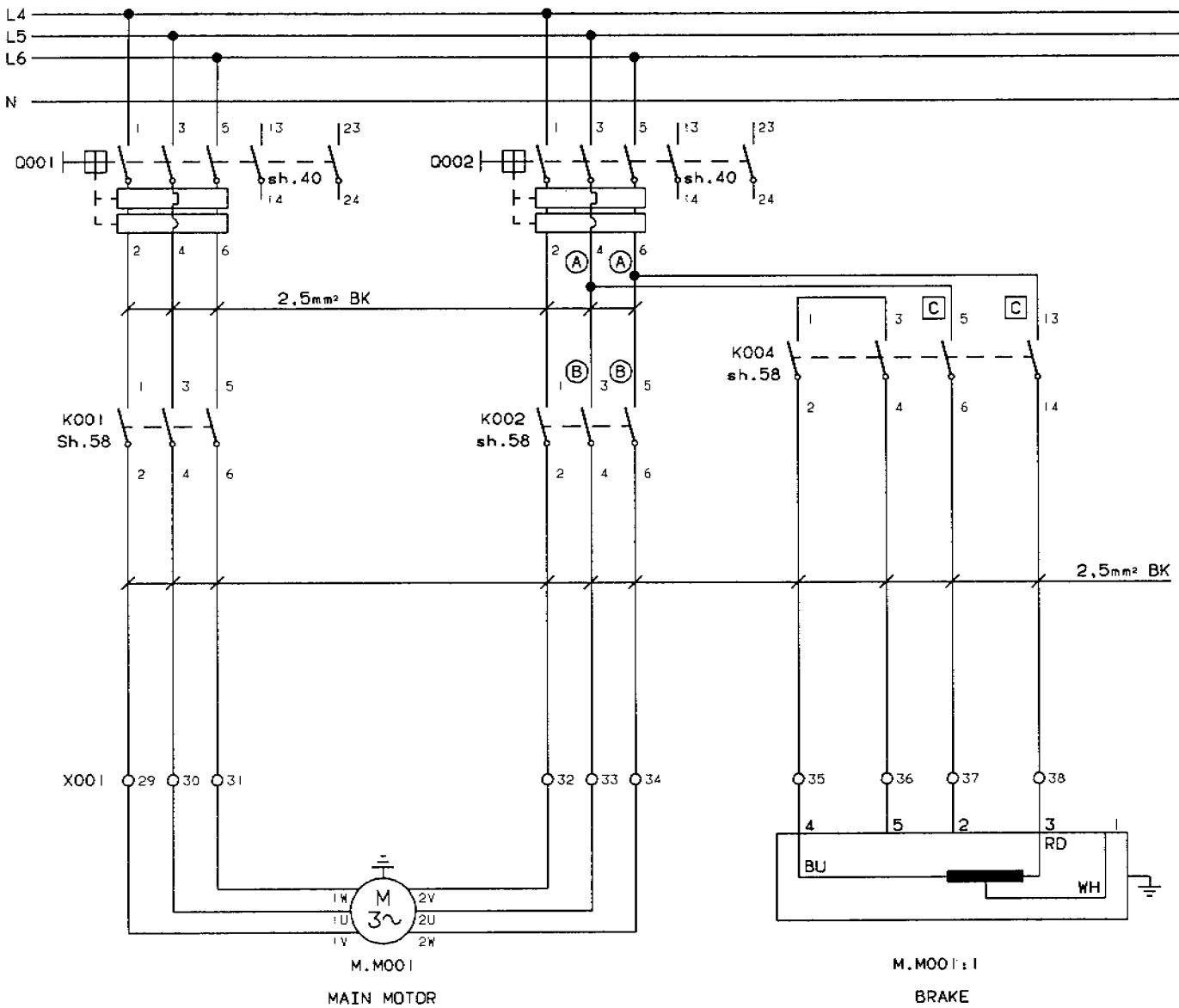

INTRODUCED WITH AM NO.	22843	DATE: 951128	SIGN PGI				
ISSUE							
AM NO							
DATE							
SIGN.							

DRAWING REMARKS

DESCRIPTION: MOTORS

MACHINE: TBA/8-100V

44173-14:18

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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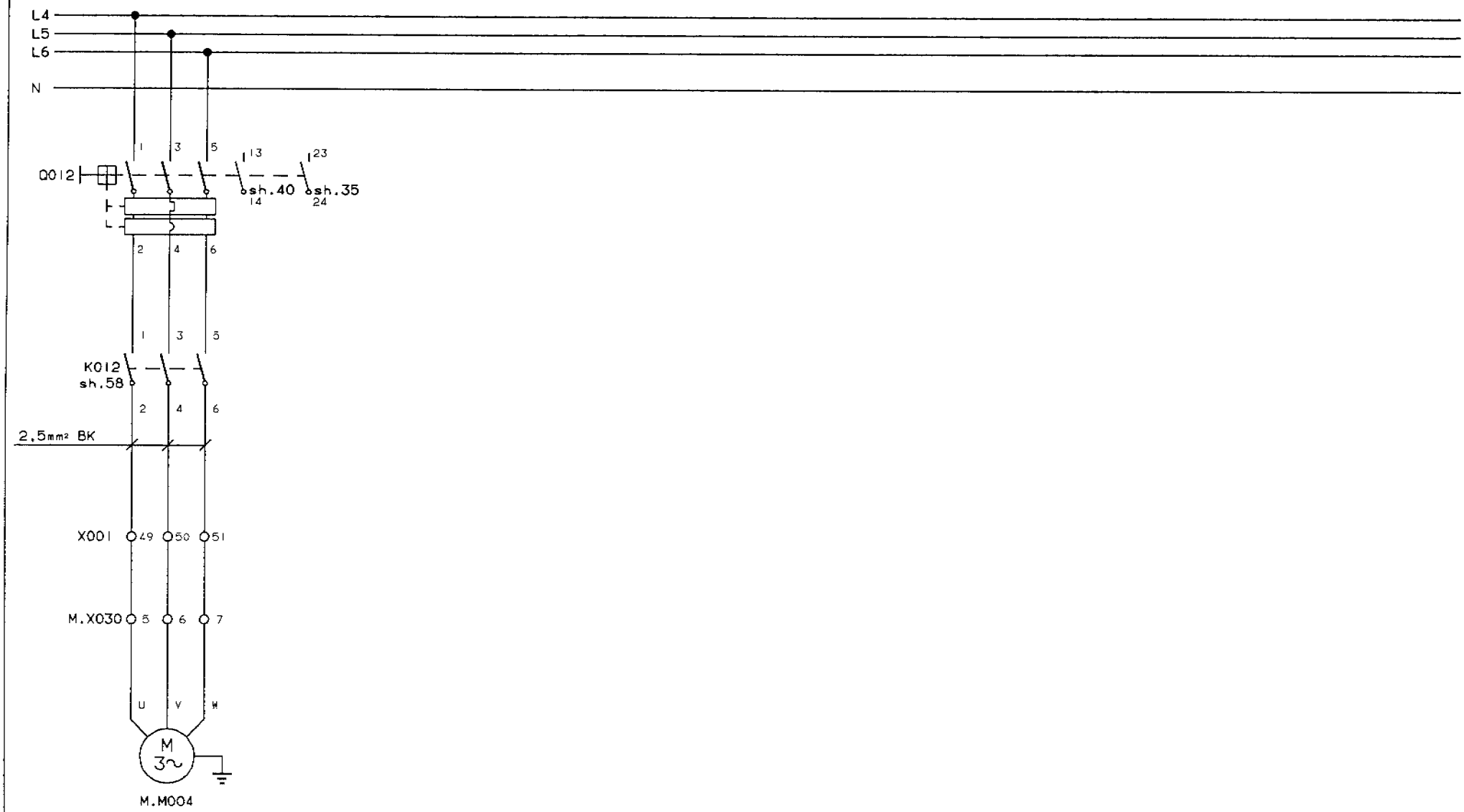

CLEANING SYSTEM
CIRCULATION PUMP

INTRODUCED WITH AM NO	22843			DATE 951128		SIGN. PGI		
ISSUE								
AM NO								
DATE								
SIGN								DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: MOTORS

MACHINE: TBA/8-100V

44173-15:18

Tetra Pak
LUND SWEDEN

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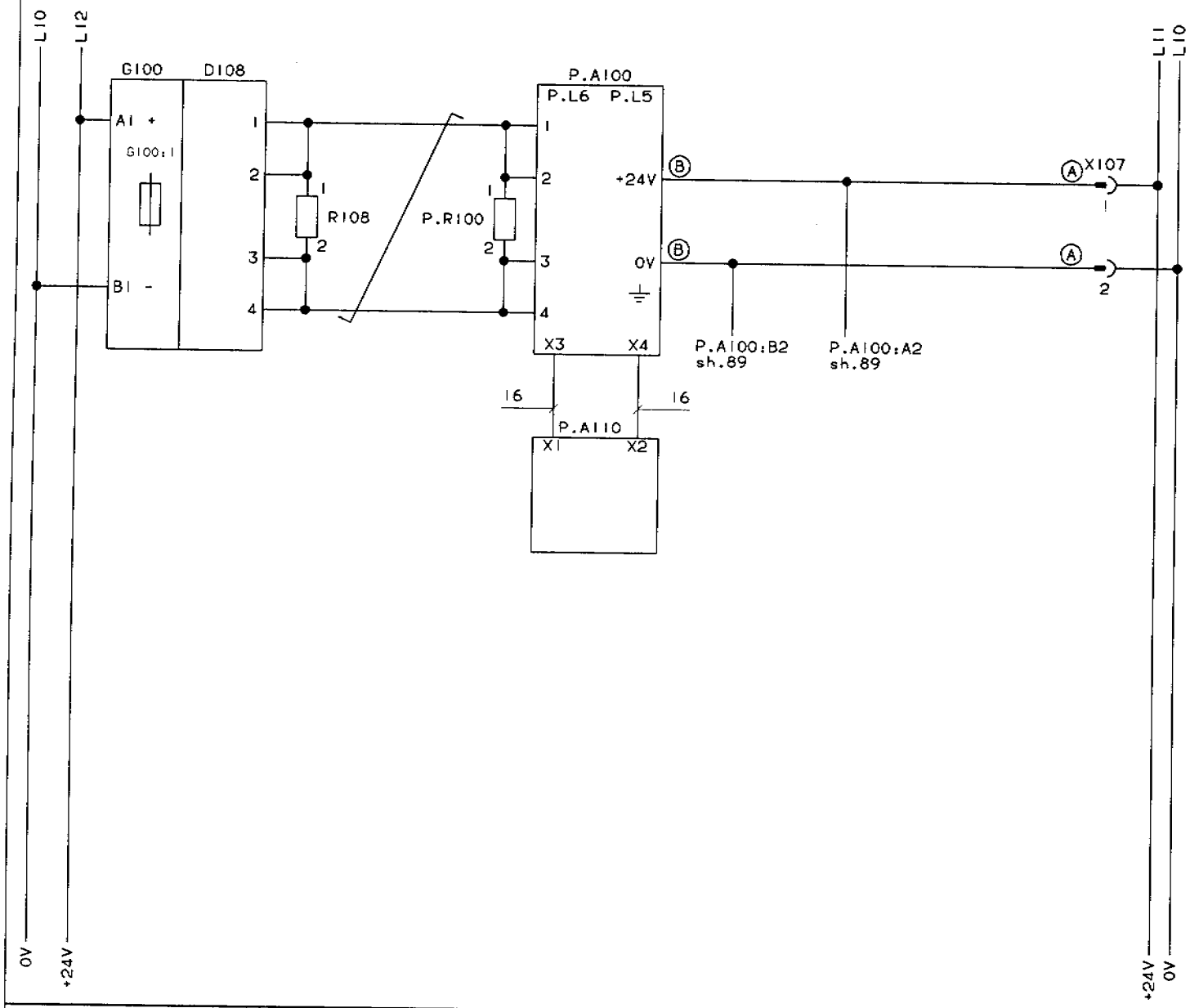

G100 PLC POWER SUPPLY

D108 PLC PROCESSOR

P.A100 PROGRAM CARD

P.A110 LED DISPLAY

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JÅB		
ISSUE	A				
AM NO.	20127				
DATE	940220				
SIGN	PSL/APO				

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PLC

MACHINE: TBA/8-100V

44173-17:01

Tetra Pak
LUND SWEDEN

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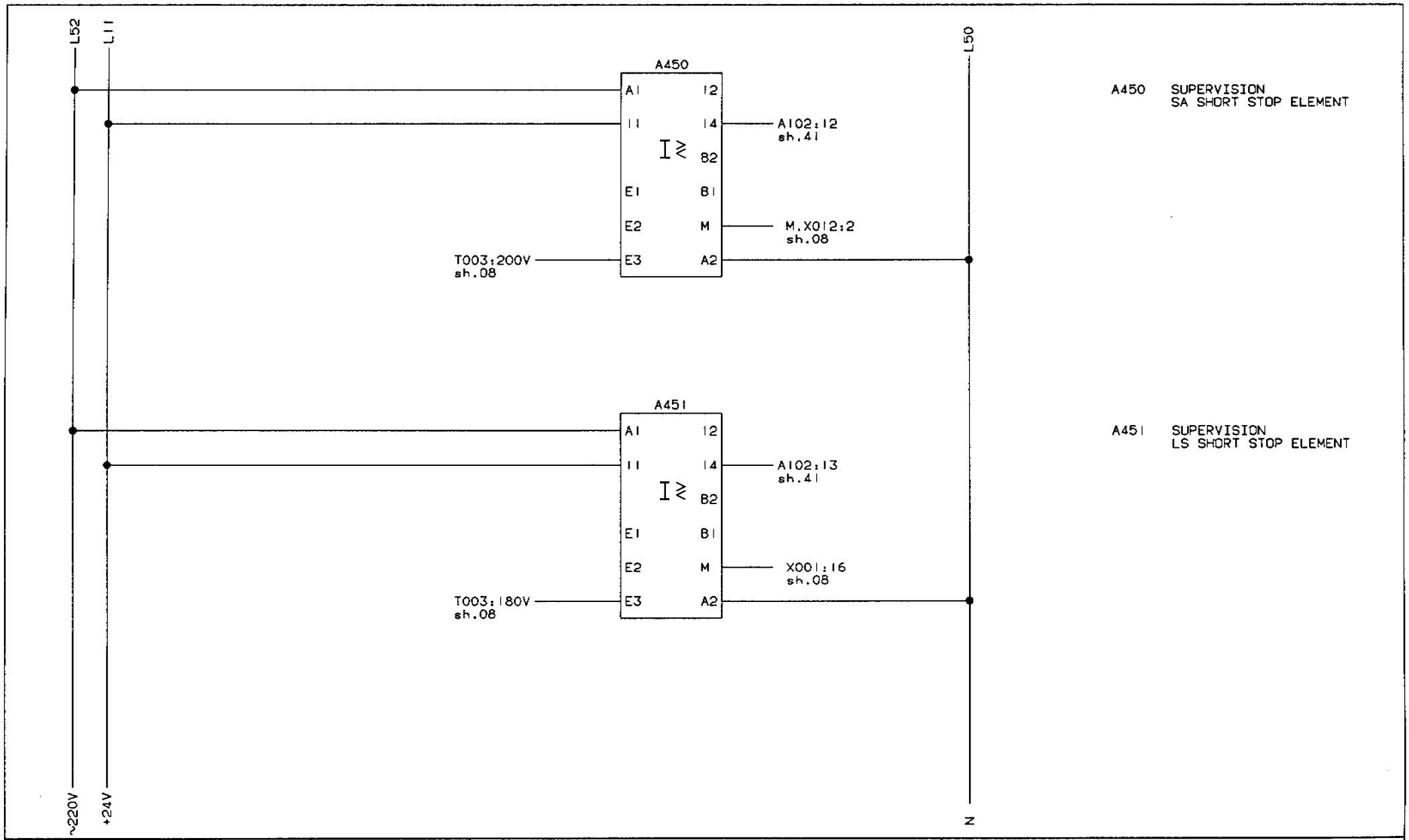

A450 SUPERVISION
SA SHORT STOP ELEMENT

A451 SUPERVISION
LS SHORT STOP ELEMENT

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JÅB		
ISSUE					
AM NO.					
DATE					
SIGN				DRAWING REMARKS	

DESCRIPTION: CURRENT MONITORS

MACHINE: TBA/8-100V

44173-18:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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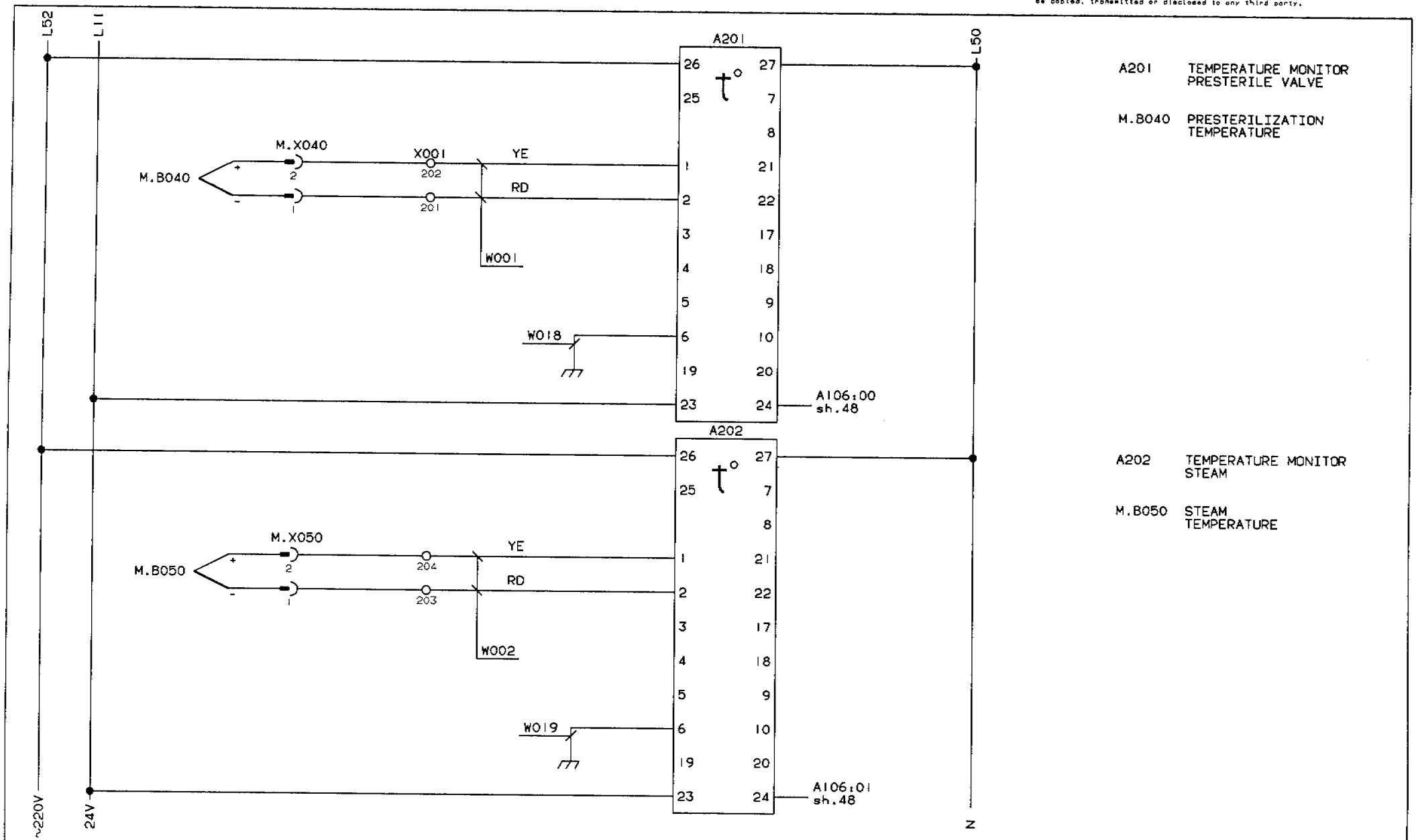


A201 TEMPERATURE MONITOR PRESTERILE VALVE

M.B040 PRESTERILIZATION TEMPERATURE

A202 TEMPERATURE MONITOR STEAM

M.B050 STEAM TEMPERATURE

INTRODUCED WITH AM NO.	22843	DATE: 951128	SIGN PGI				
ISSUE							
AM NO							
DATE							
SIGN							

DRAWING REMARKS

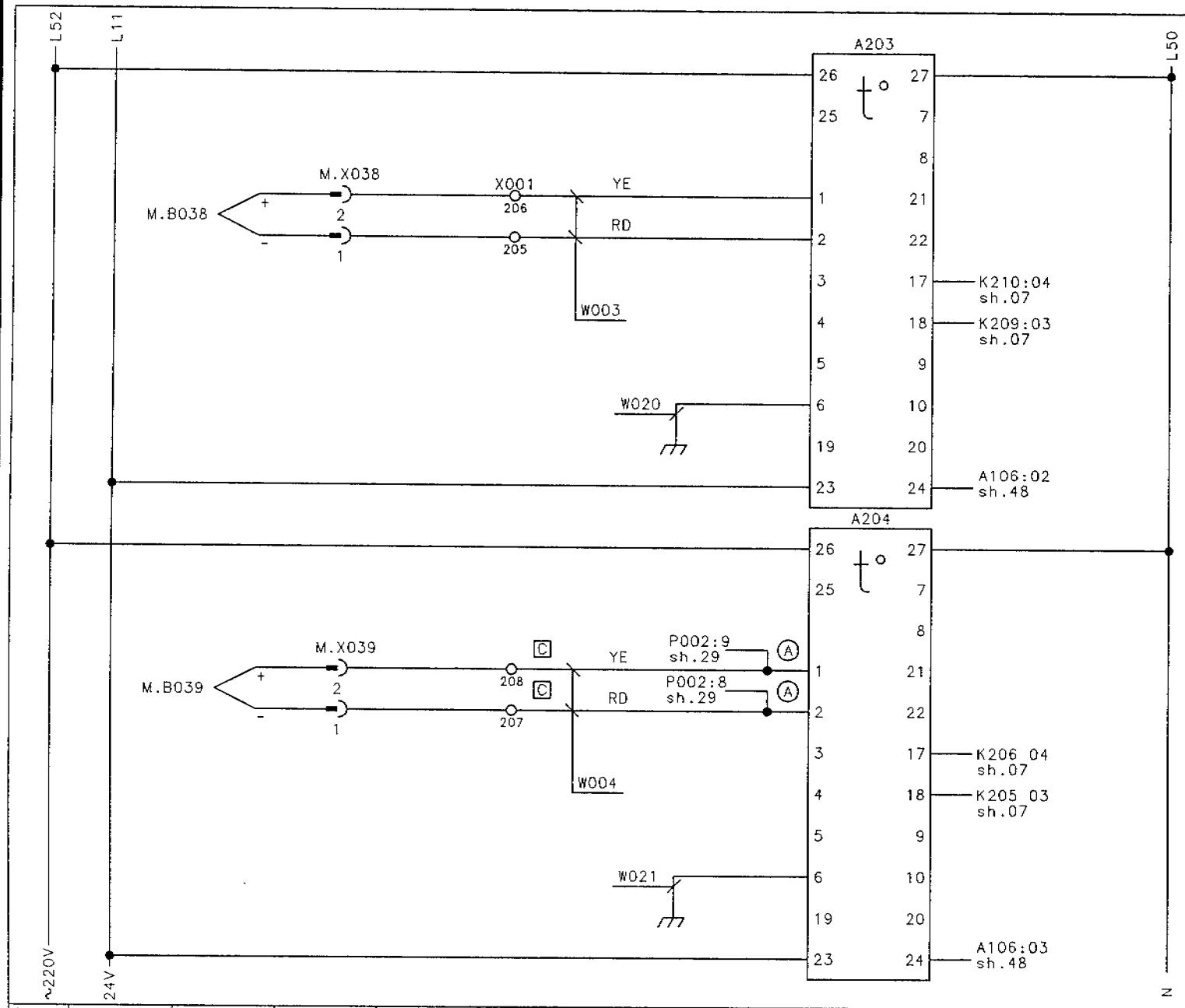
ALTERATIONS ONLY IN CADAM

DESCRIPTION: TEMPERATURE REGULATORS

MACHINE: TBA/8-100V

44173-19:18

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



A203	TEMPERATURE REGULATOR PEROXIDE BATH
M.B038	PEROXIDE BATH TEMPERATURE
A204	TEMPERATURE REGULATOR AIR SUPERHEATER
M.B039	AIR SUPERHEATER TEMPERATURE

Note	A				
ECN No.	71182				
Sign./Date	DBI/971030				
Appr./Date	PGI/971030				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –
Machine TBA/8-1000	Denomination TEMPERATURE REGULATORS			
Drawing No 44173-20:37				Page –

Tetra Pak
LUND SWEDEN

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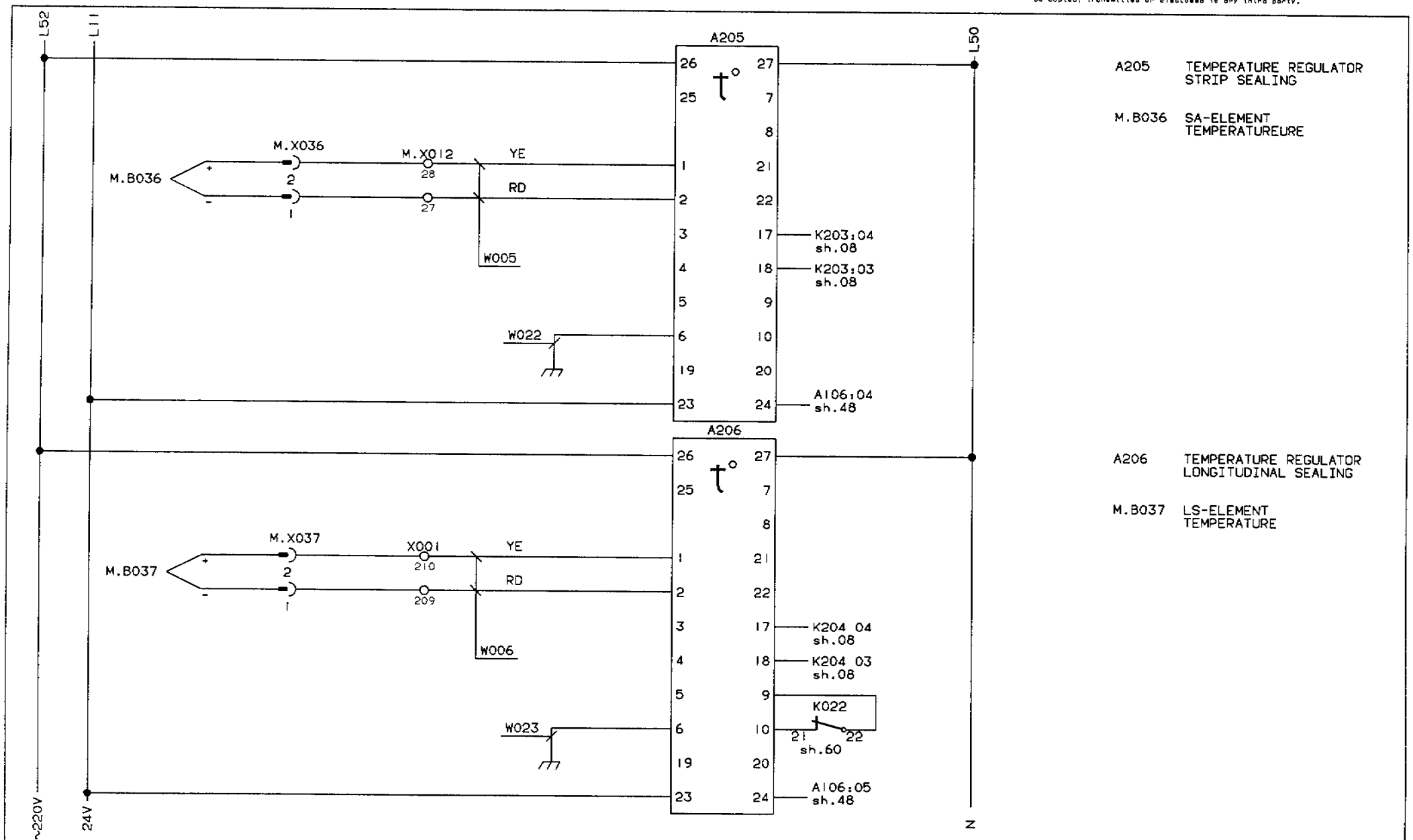

A205 TEMPERATURE REGULATOR STRIP SEALING

M.B036 SA-ELEMENT TEMPERATUREURE

A206 TEMPERATURE REGULATOR LONGITUDINAL SEALING

M.B037 LS-ELEMENT TEMPERATURE

INTRODUCED WITH AM NO	22843		DATE: 951128		SIGN. PGI				
ISS.K									
AM NO.									
DATE									
SIGN									

DRAWING REMARKS

DESCRIPTION: TEMPERATURE REGULATORS

MACHINE: TBA/8-100V

44173-21:18

ALTERATIONS ONLY IN CADAM

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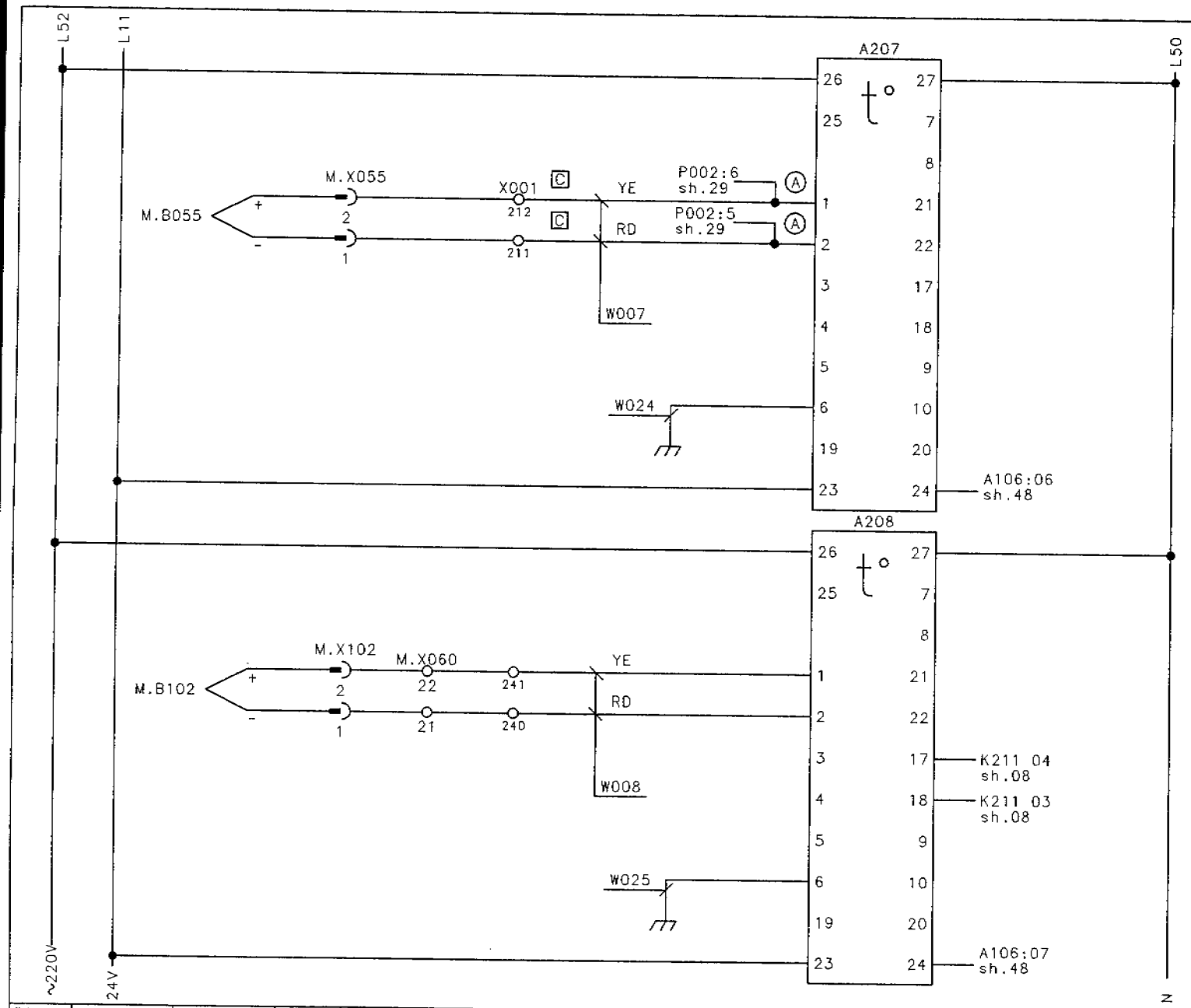

A207 TEMPERATURE REGULATOR AIR KNIFES

M.B055 AIR KNIVES TEMPERATURE

A208 TEMPERATURE REGULATOR SPLICER ASU

M.B102 SPLICER ASU ELEMENT TEMPERATURE

Note	A				
ECN No.	71182				
Sign./Date	DBI/971030				
Appr./Date	PGI/971030				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –	
Machine TBA/8-1000	Denomination TEMPERATURE REGULATORS				
Drawing No 44173-22:37				Page –	

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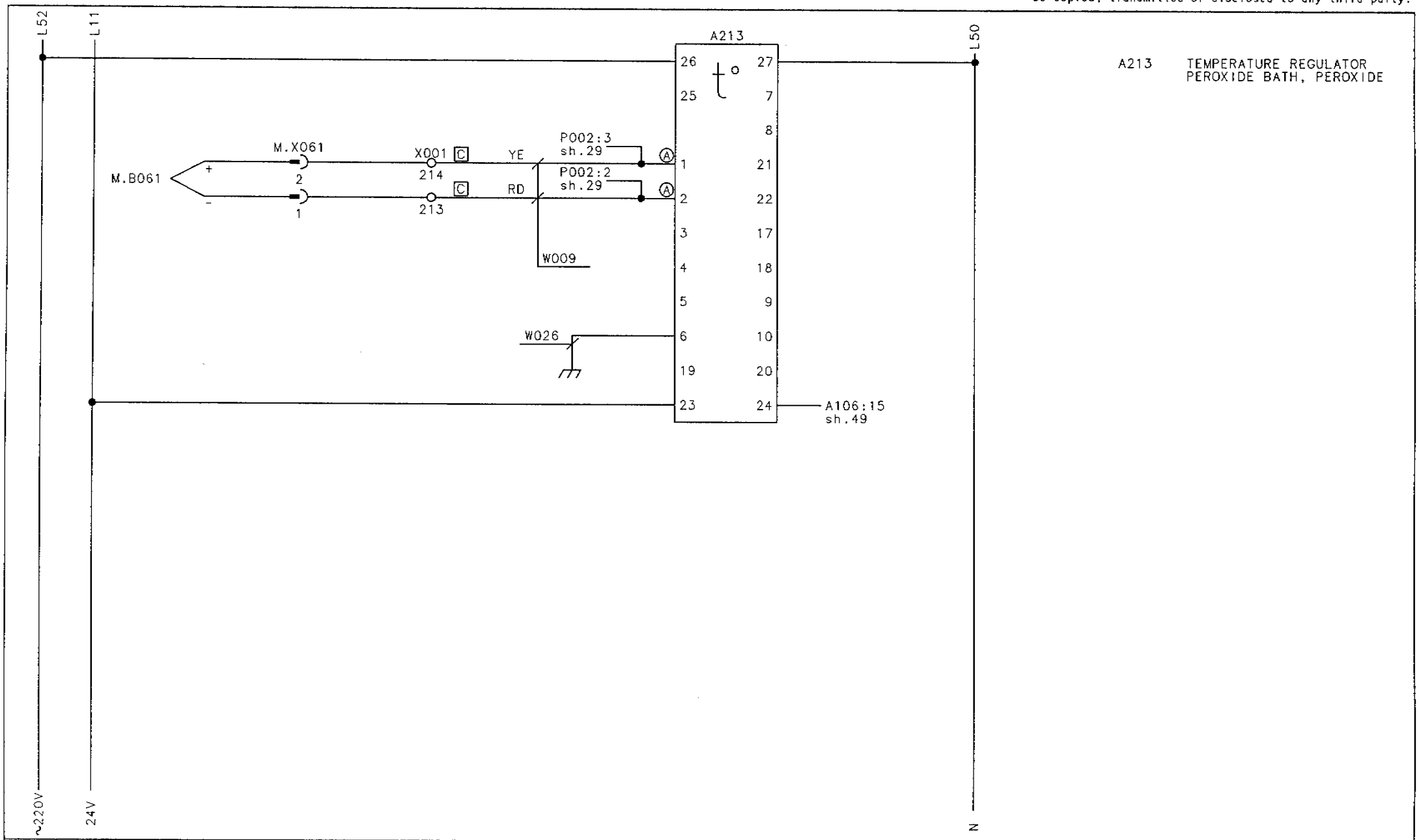

A213 TEMPERATURE REGULATOR PEROXIDE BATH, PEROXIDE

Note	A					Tetra Pak	Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –
ECN No.	71182						Machine TBA/8-1000	Denomination TEMPERATURE REGULATORS			
Sign./Date	DBI/971030										
Appr./Date	PGI/971030				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 44173-25:37			Page –

Tetra Pak
LUND SWEDEN

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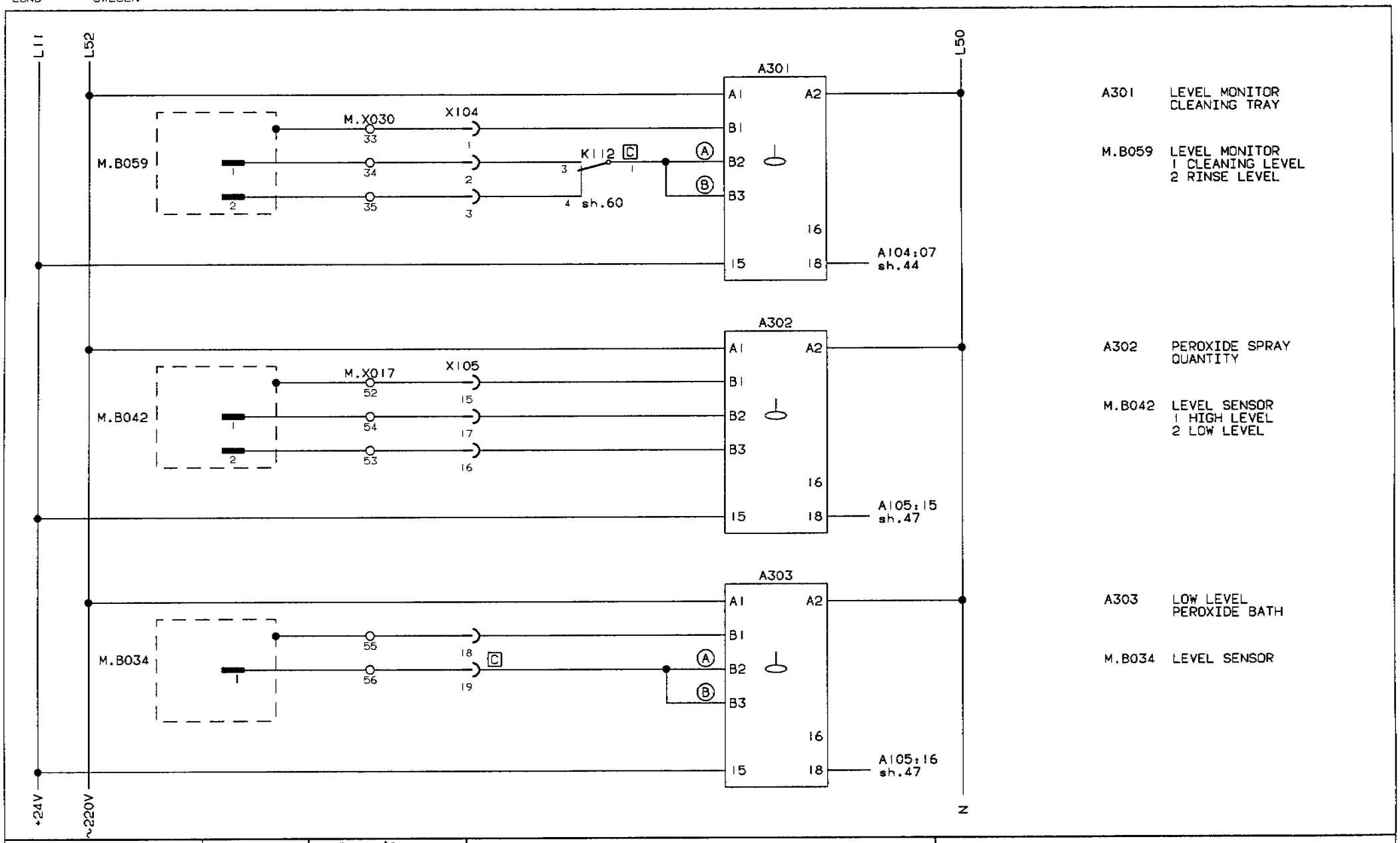

A301	LEVEL MONITOR CLEANING TRAY
M.B059	LEVEL MONITOR 1 CLEANING LEVEL 2 RINSE LEVEL
A302	PEROXIDE SPRAY QUANTITY
M.B042	LEVEL SENSOR 1 HIGH LEVEL 2 LOW LEVEL
A303	LOW LEVEL PEROXIDE BATH
M.B034	LEVEL SENSOR

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JAB	DESCRIPTION: LEVEL RELAYS
ISSUE			MACHINE: TBA/8-100V
AM NO			44173-27:01
DATE			
SIGN		DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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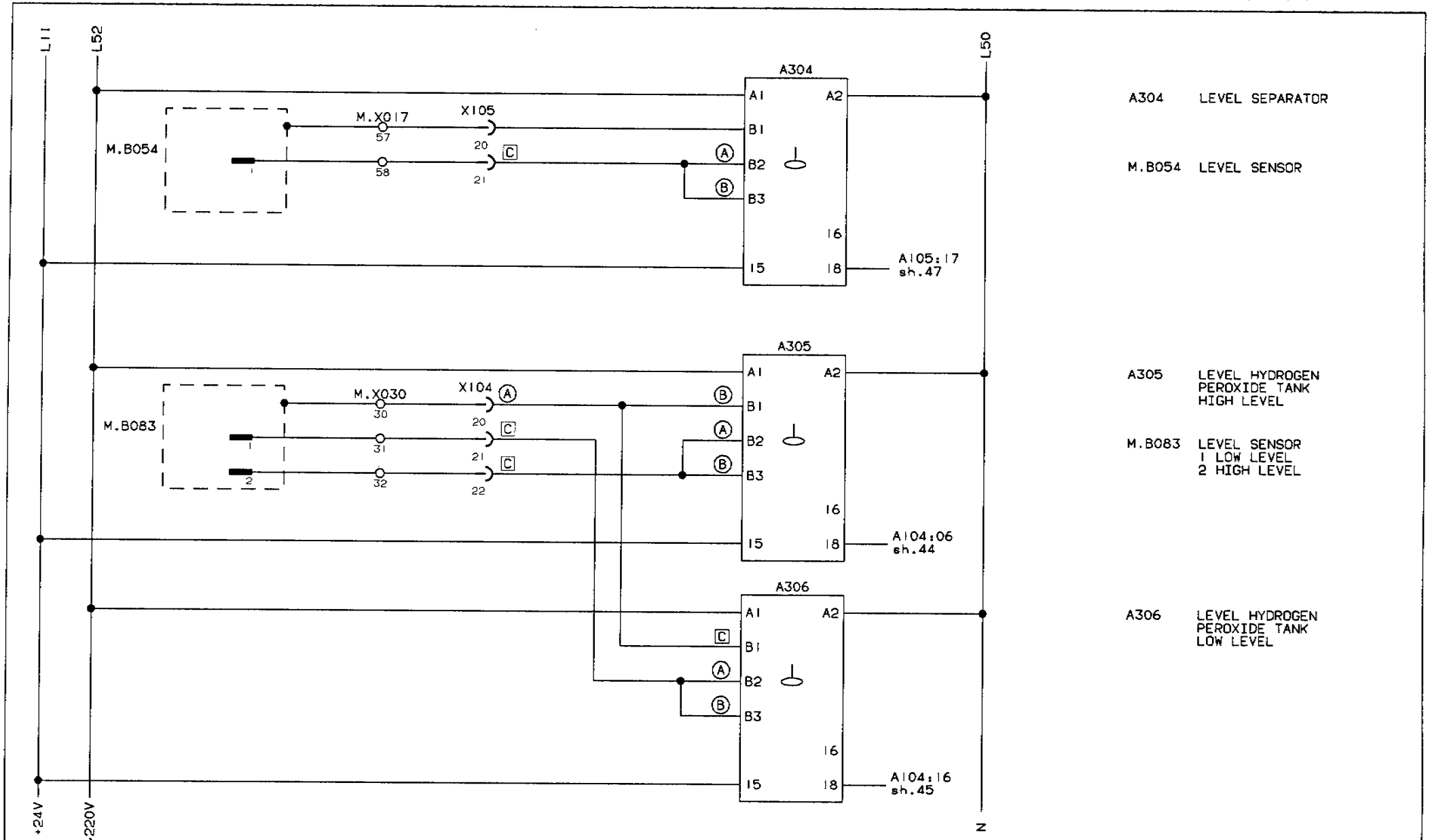

A304 LEVEL SEPARATOR

M.B054 LEVEL SENSOR

A305 LEVEL HYDROGEN PEROXIDE TANK HIGH LEVEL

M.B083 LEVEL SENSOR
1 LOW LEVEL
2 HIGH LEVEL

A306 LEVEL HYDROGEN PEROXIDE TANK LOW LEVEL

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JÅB	
ISSUE			
AM NO			
DATE			
SIGN.			DRAWING REMARKS

DESCRIPTION: LEVEL RELAYS

MACHINE: TBA/8-100V

44173-28:01

ALTERATIONS ONLY IN CADAM

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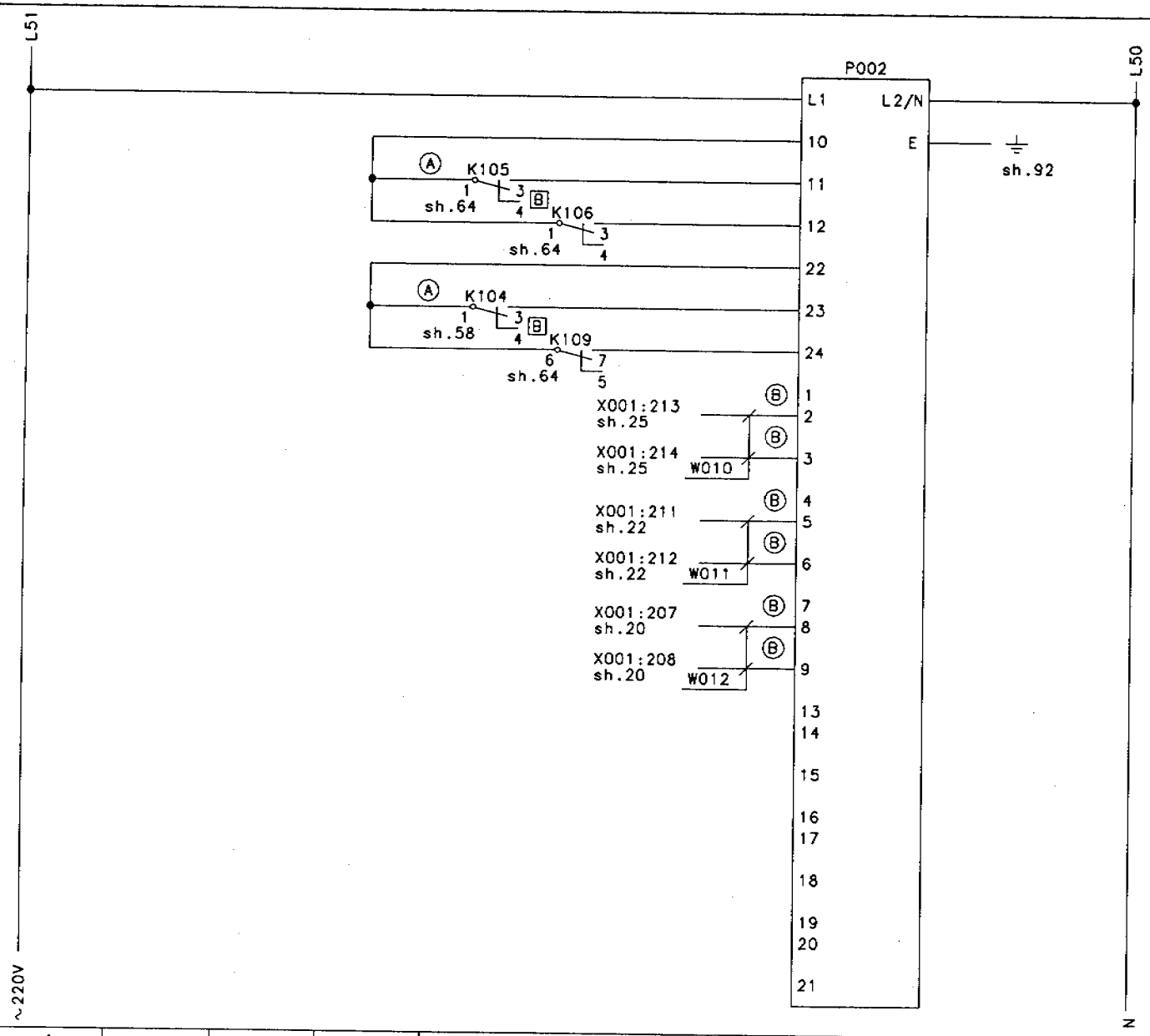

P002 RECORDER

DIG.1 STERILE PARAM.
(VIOLET COLOR TRACE)

DIG.2 OPERATIONAL PARAM.
(RED COLOR TRACE)

DIG.3 MAIN MOTOR ON
(GREEN COLOR TRACE)

DIG.4 PRODUCTION
(BLACK COLOR TRACE)

ANALOG CHANNEL1
TEMP.H2O2

ANALOG CHANNEL2
TEMP.AIR KNIVES

ANALOG CHANNEL3
STERILE AIR TEMP.

Note	A				
ECN No.	71023				
Sign./Date	DBI/970901				
Appr./Date	DBI/970901				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 970901 | Approved DBI | Date 970901 | Doc. class –

Machine: TBA/8-1000

Denomination: STERILE CONDITIONS

Drawing No: 44173-29:36

Page –

Tetra Pak
LUND SWEDEN

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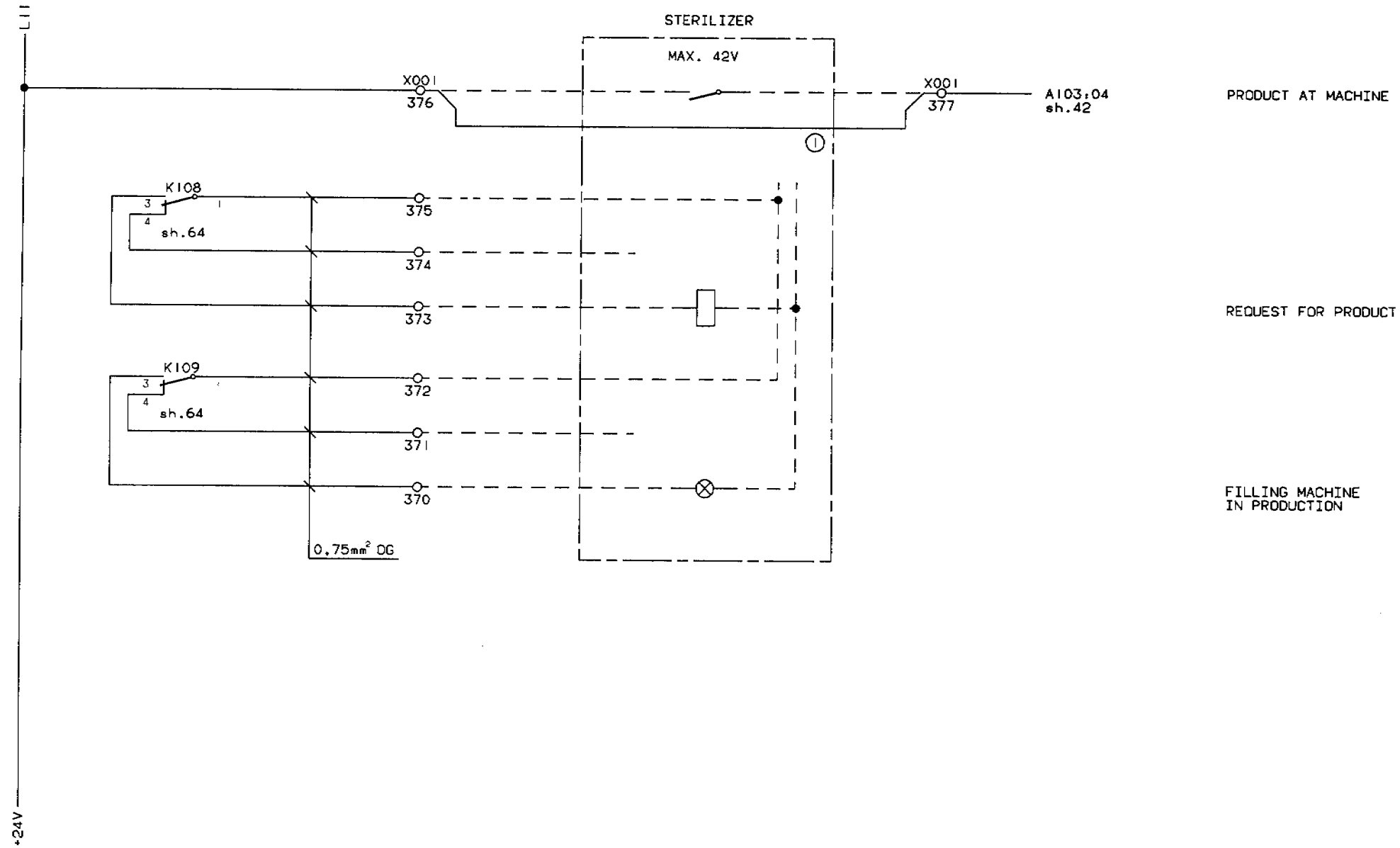

INTRODUCED WITH AM NO. 19666	DATE 930630	SIGN. BWM/JÅB	(1) TO BE REMOVED WHEN PROCESS SIGNAL ARE AVAILANBLE.	DESCRIPTION: STERILIZER
ISSUE				MACHINE: TBA/8-100V
AM NO				44173-30:01
DATE				
SIGN			DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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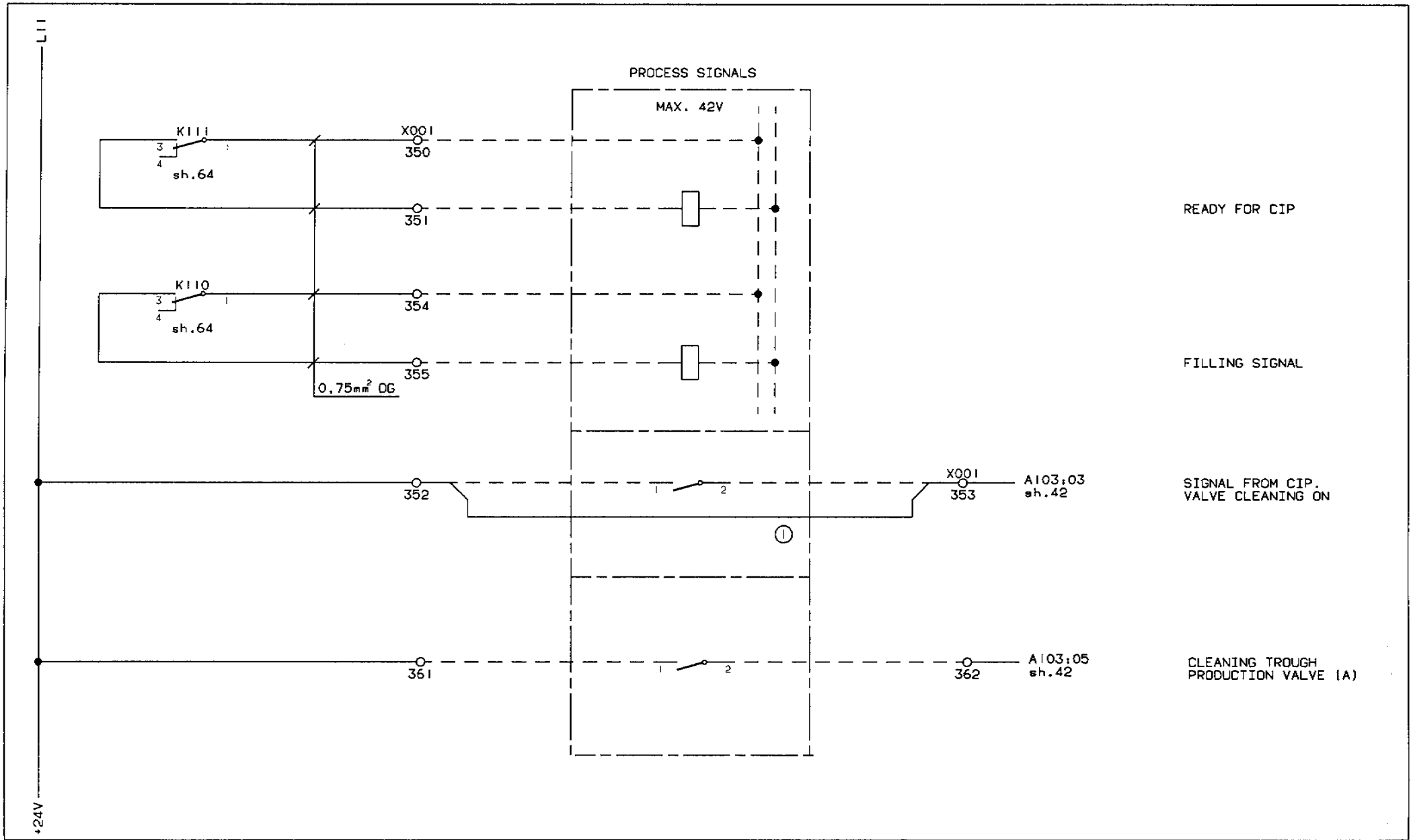

INTRODUCED WITH AM NO.	19666			DATE 930630		SIGN. BWM/JAB		
ISSUE								
AM NO.								
DATE								
SIGN.								

1 TO BE REMOVED WHEN PROCESS SIGNAL ARE AVAILABLE.

DRAWING REMARKS

DESCRIPTION: PROCESS SIGNALS

MACHINE: TBA/8-100V

44173-31:01

ALTERATIONS ONLY IN CADAM

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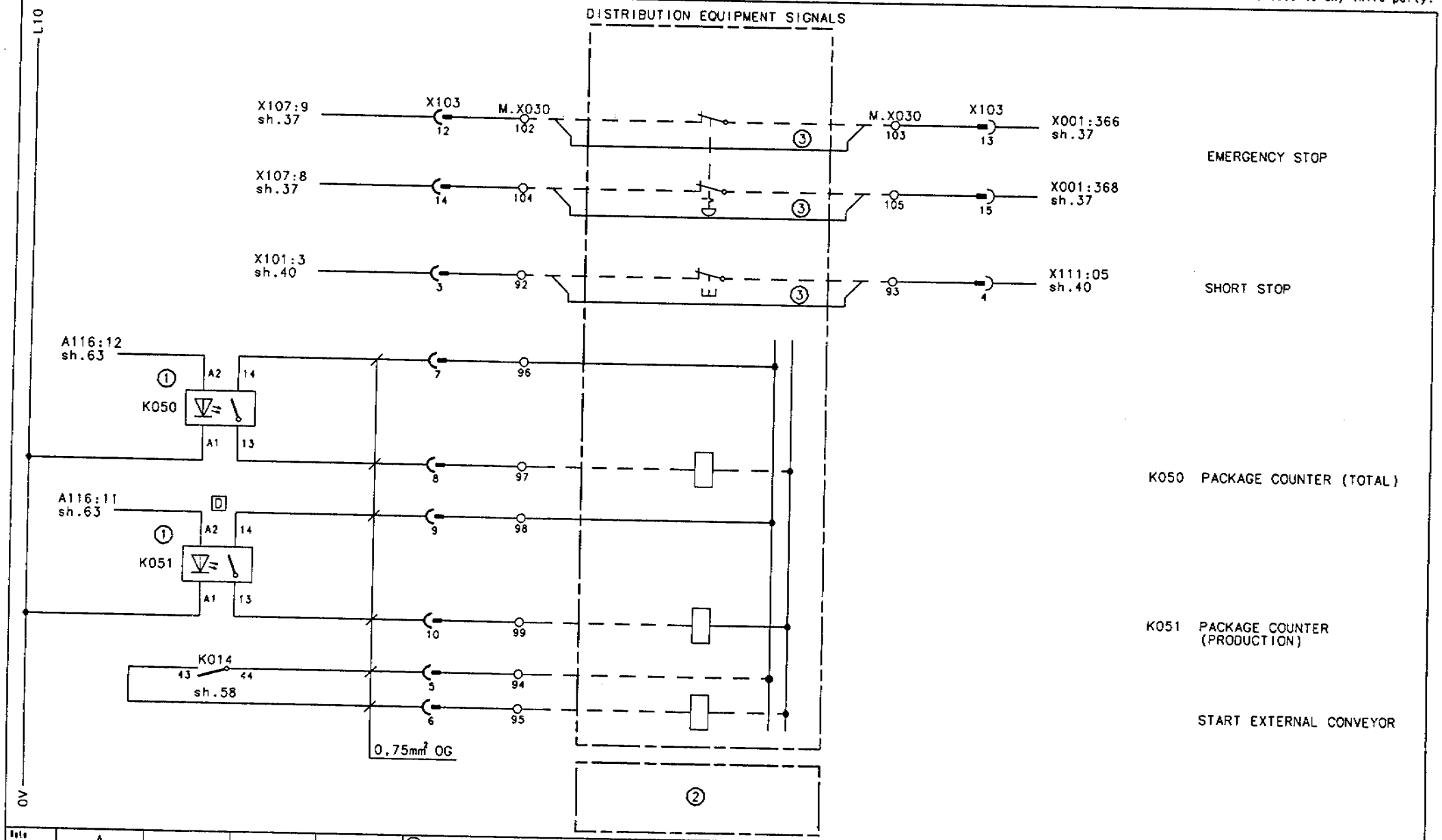

Rev	A			
ECN No.	70684			
Sign./Date	FRM/970314			
Appr./Date	FRM/970314			

1. K050 AND K051 ARE MOUNTED ON THE SAME RAIL AS X001:350-378. FOR FURTHER INF. SEE DRWG. 4-575811
2. FOR OTHER DE-CONNECTIONS SEE SH. 11, 45 AND 58.
3. TO BE REMOVED WHEN Drawing remarks DE-SIGNALS ARE AVAILABLE.

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer: FRM Date: 970314 Approved: FRM Date: 970314 Doc. class: -

Machine: TBA/8-1000

Description: DISTRIBUTION EQUIPMENT SIGNALS

Drawing No: 44173-32:30

Page: -

Tetra Pak
MODENA ITALY

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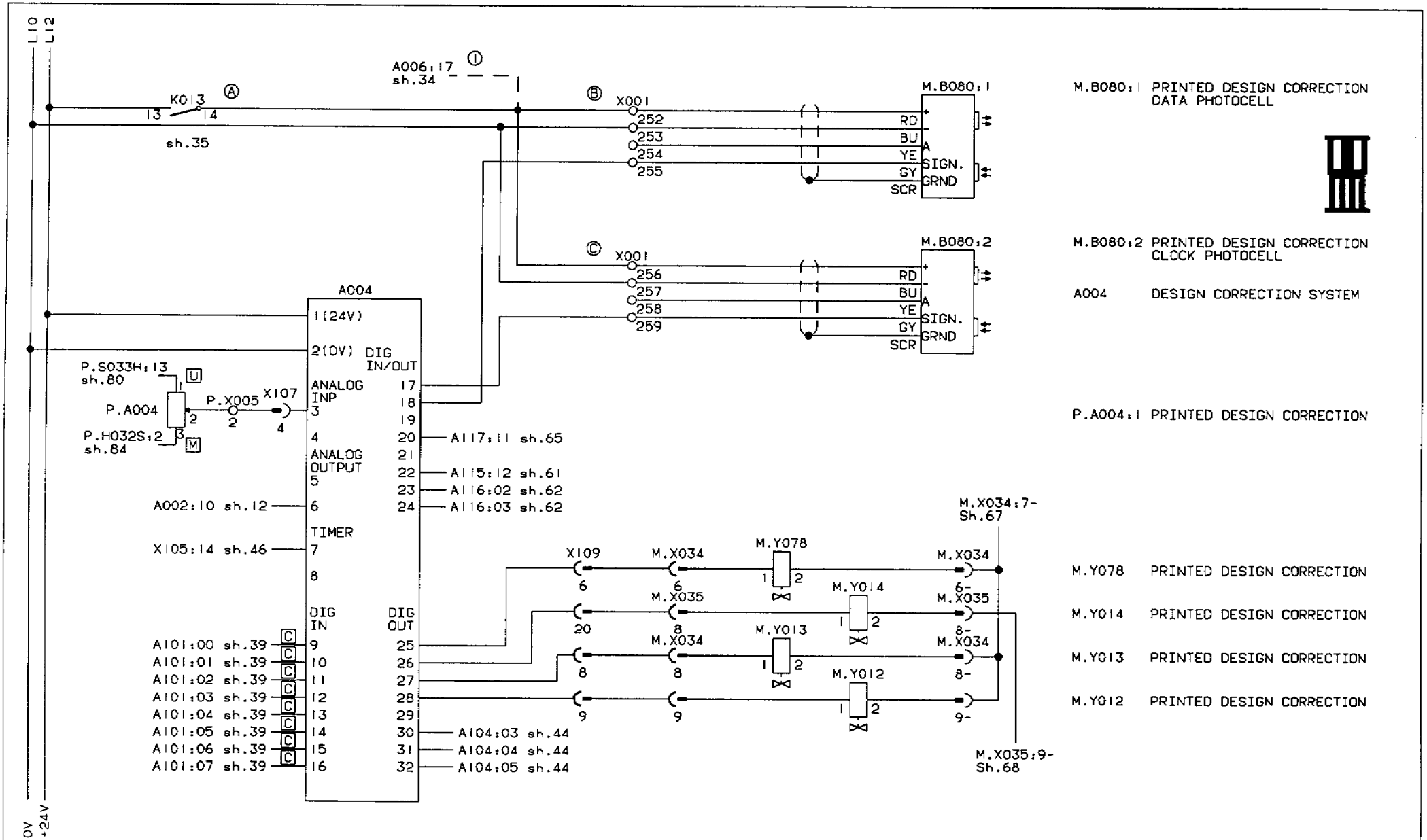

M.B080:1 PRINTED DESIGN CORRECTION DATA PHOTOCELL

M.B080:2 PRINTED DESIGN CORRECTION CLOCK PHOTOCELL

A004 DESIGN CORRECTION SYSTEM

P.A004:1 PRINTED DESIGN CORRECTION

M.Y078 PRINTED DESIGN CORRECTION

M.Y014 PRINTED DESIGN CORRECTION

M.Y013 PRINTED DESIGN CORRECTION

M.Y012 PRINTED DESIGN CORRECTION

AUTHORIZED WITH AM NO.	19666		DATE 930630	SIGN. BWM/JAB			① EXTRA EQUIPMENT	
ISSUE	A	B						
AM NO	20127	20588						
DATE	940202	941024						
SIGN.	PSL	PSL						

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PRINTED DESIGN CORRECTION

MACHINE: TBA/8-100V

44173-33:01

Tetra Pak
LUND SWEDEN

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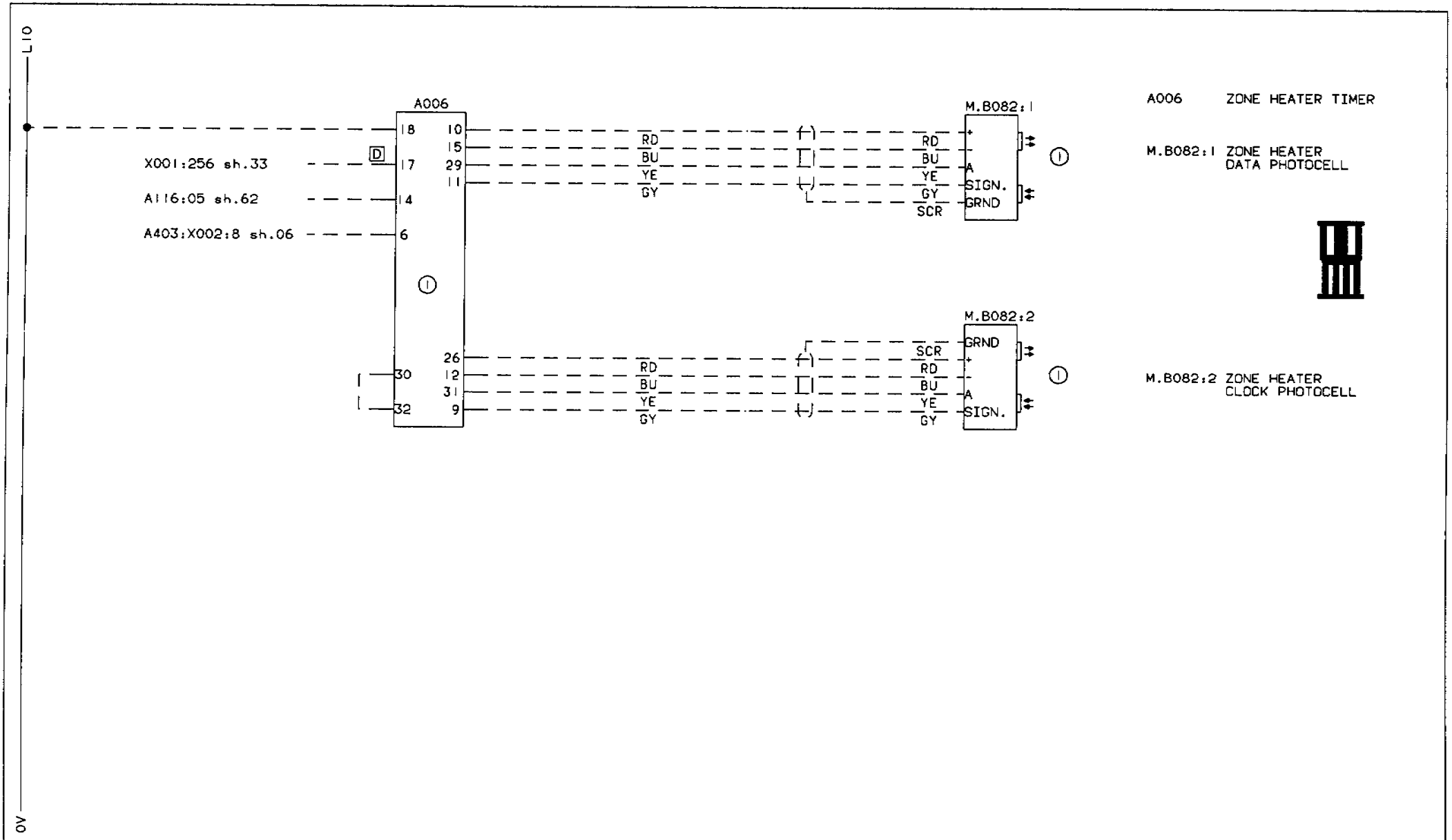

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JÅB	(1) EXTRA EQUIPMENT	DESCRIPTION: CONTROL CIRCUIT ZONE HEATER
ISSUE					MACHINE: TBA/8-100V
AM NO.					44173-34:01
DATE					
SIGN				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

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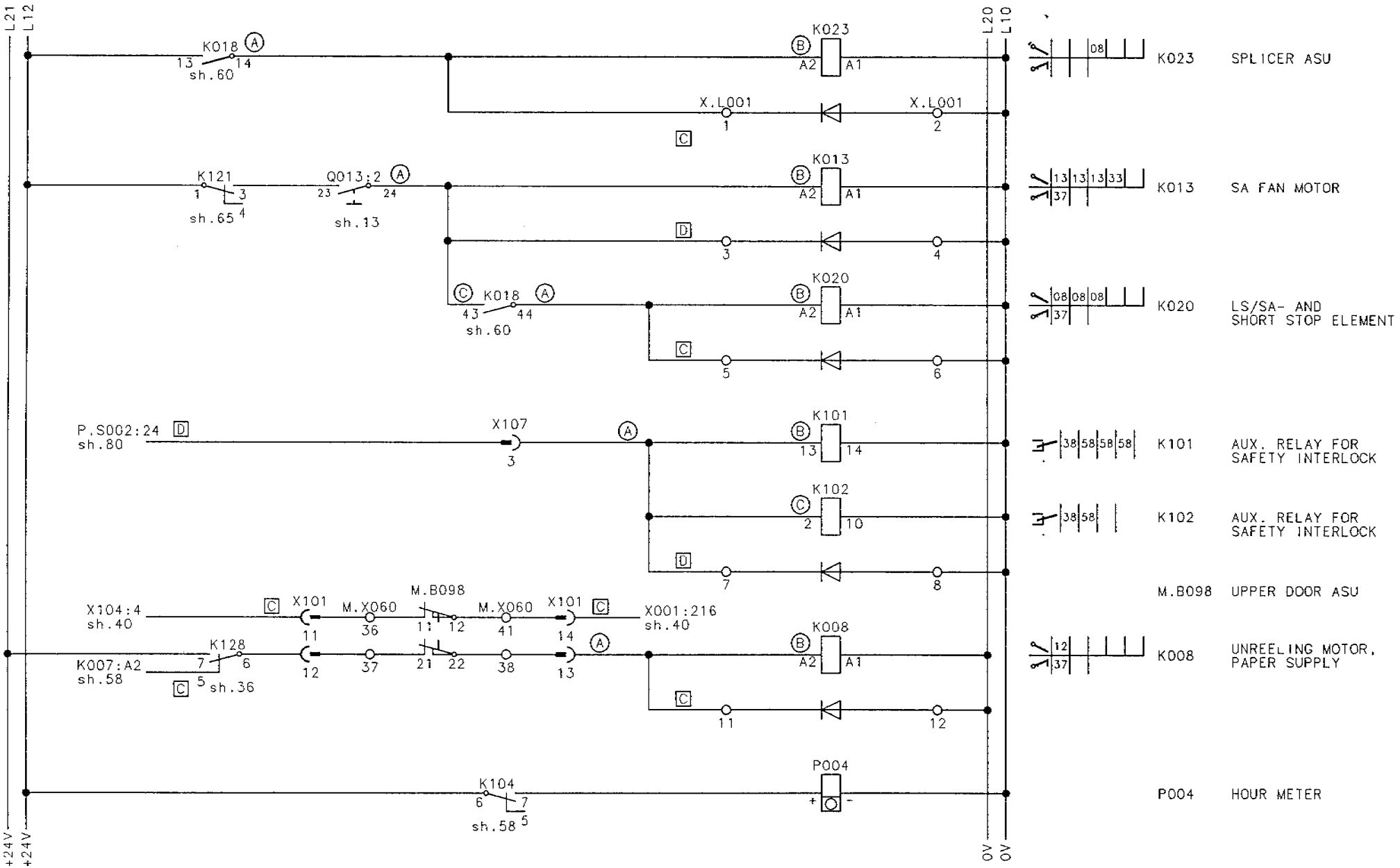

note	A					Designer RAI	Date 980309	Approved PGI Date 980309	Dec. class –
ECN No.	71424					Machine TBA/8-1000	Denomination AUXILIARY RELAYS		
Sign./Date	RAI/980309					Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-35:43		Page –
Appr./Date	PGI/980309				Drawing remarks				

Tetra Pak

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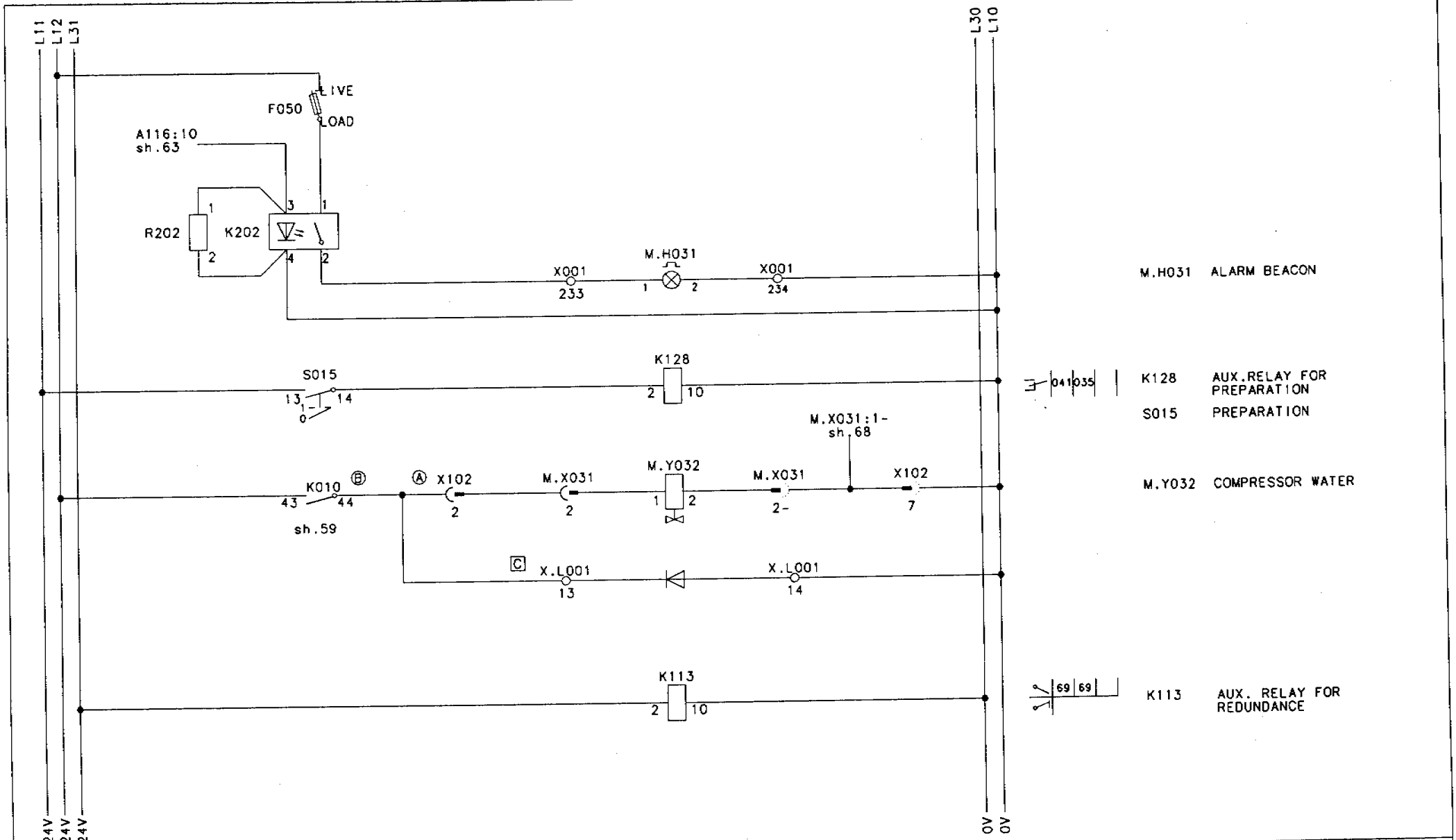

Note	A				
ECN No.	70775				
Sign./Date	FRM/970404				
Appr./Date	FRM/970404				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM	Date 970404	Approved FRM	Date 970404
Machine TBA/8-1000	Description MISCELLANEOUS		Doc. class –
Drawing No 44173-36:32			Page –

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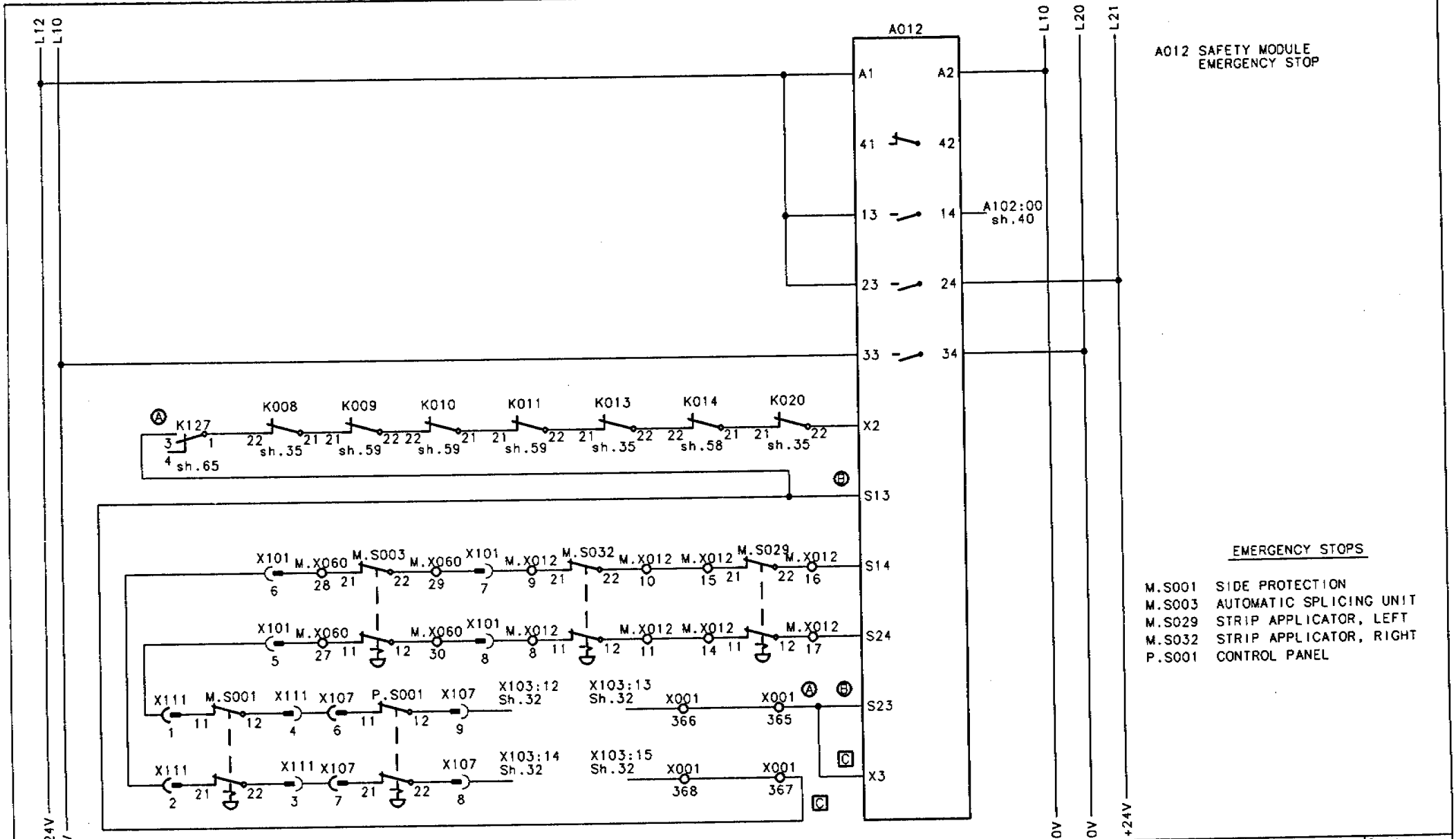

A012 SAFETY MODULE
EMERGENCY STOP

EMERGENCY STOPS

M.S001 SIDE PROTECTION
M.S003 AUTOMATIC SPLICING UNIT
M.S029 STRIP APPLICATOR, LEFT
M.S032 STRIP APPLICATOR, RIGHT
P.S001 CONTROL PANEL

Rev.	A				
ECN No.	70684				
Sign./Date	FRM/970314				
Appr./Date	FRM/970314				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM Date 970314 | Approved FRM Date 970314 | Doc. class –

Machine: TBA/8-1000

Denomination: EMERGENCY STOP FUNCTION

Drawing No: 44173-37:30

Page –

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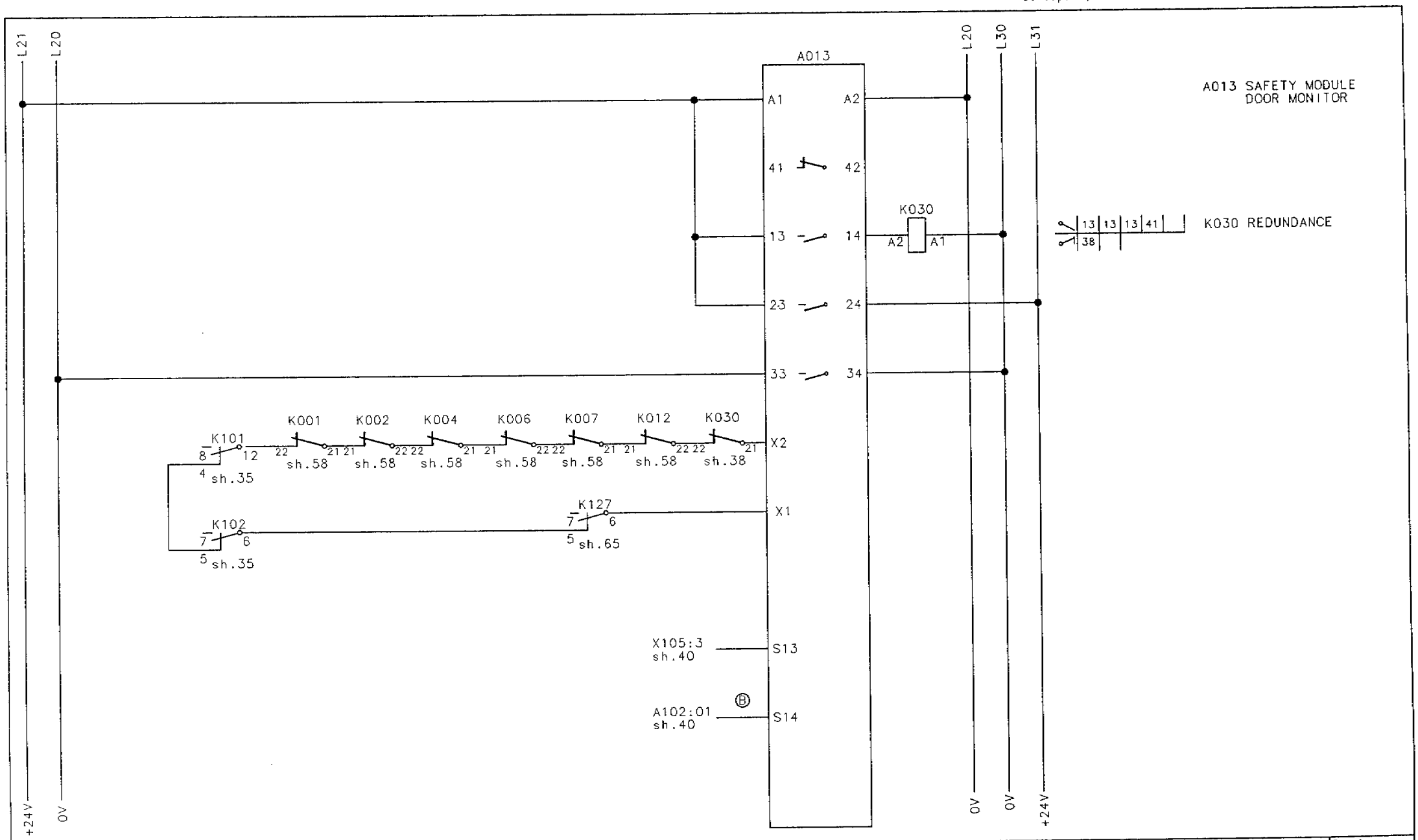

Note	A				
ECN No.	71424				
Sign./Date	RAI/980309				
Appr./Date	PGI/980309				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class –
Machine TBA/8-1000	Denomination EMERGENCY STOP FUNCTION			
Drawing No 44173-38:43				Page –

Tetra Pak
MODENA ITALY

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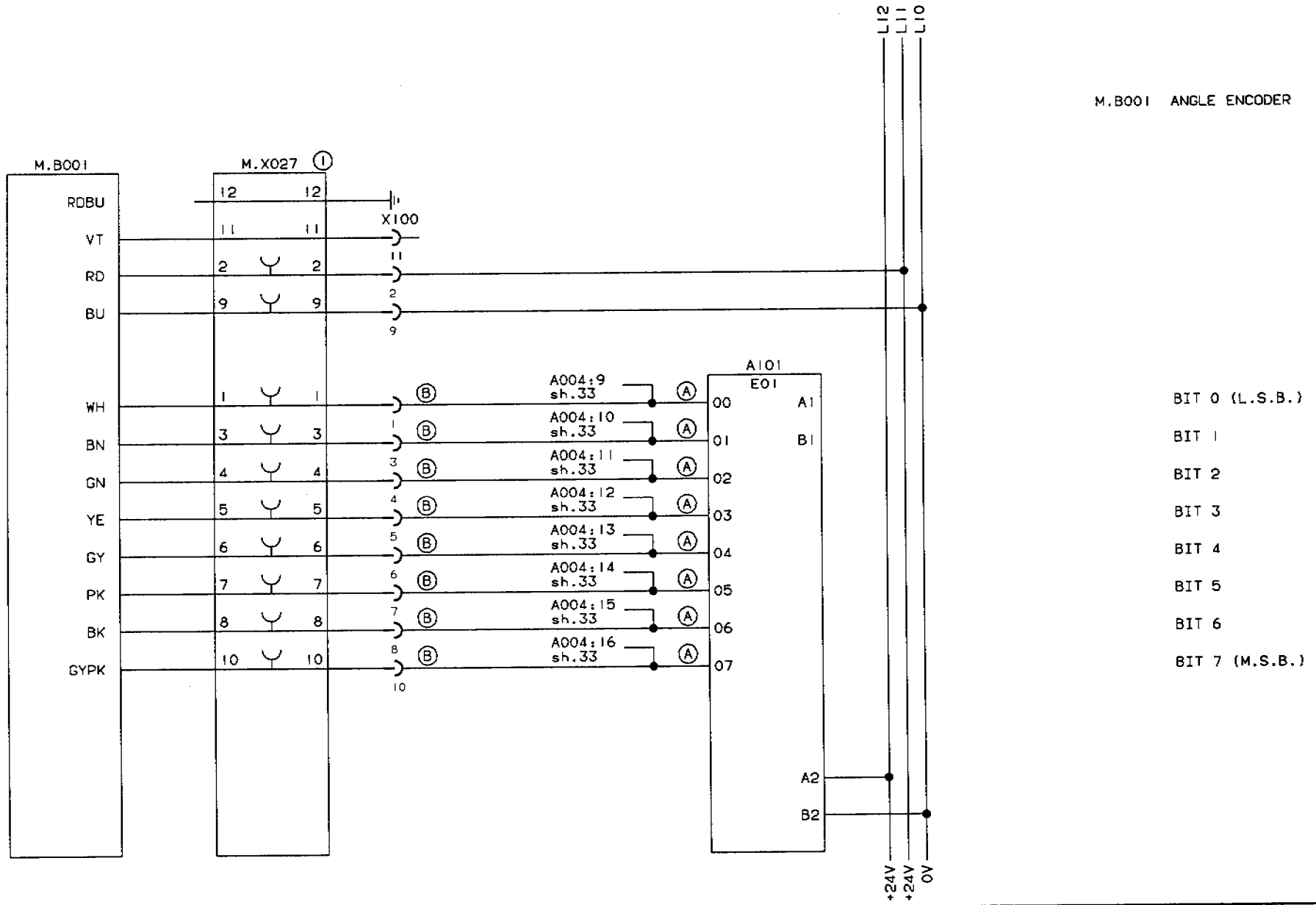

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÅB	(1) DISPLAY CONNECTION (1-15), ANGLE ENCODER	DESCRIPTION: ANGLE ENCODER
ISSUE	A				
AM NO.	20127				MACHINE: TBA/8-100V
DATE	940202				44173-39:01
SIGN.	PSL			DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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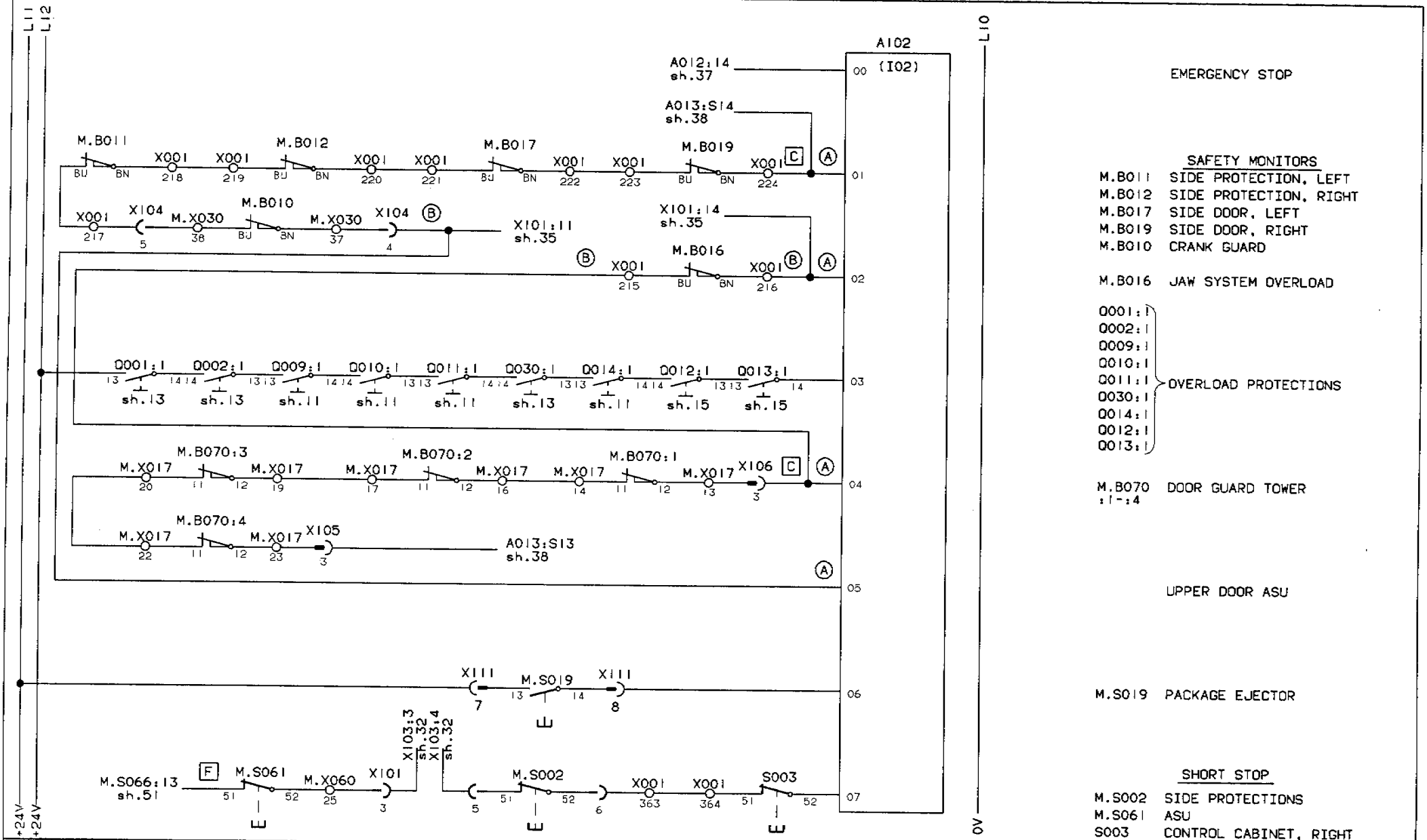

EMERGENCY STOP

SAFETY MONITORS

M.B011 SIDE PROTECTION, LEFT
M.B012 SIDE PROTECTION, RIGHT
M.B017 SIDE DOOR, LEFT
M.B019 SIDE DOOR, RIGHT
M.B010 CRANK GUARD

M.B016 JAW SYSTEM OVERLOAD

Q001:1
Q002:1
Q009:1
Q010:1
Q011:1
Q030:1
Q014:1
Q012:1
Q013:1
} OVERLOAD PROTECTIONS

M.B070 :1-:4 DOOR GUARD TOWER

UPPER DOOR ASU

M.S019 PACKAGE EJECTOR

SHORT STOP

M.S002 SIDE PROTECTIONS
M.S061 ASU
S003 CONTROL CABINET, RIGHT

INTRODUCED WITH AV NO.	19666		DATE: 930630		SIGN. BWM/JÅB			
ISSUE	A	B						
AV NO	20127	20588						
DATE	931203	941024						
SIGN.	PSL	PSL						

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PLC-IN I02, MACHINE POSITIONS

MACHINE: TBA/8-100V

44173-40:01

Tetra Pak
MODENA ITALY

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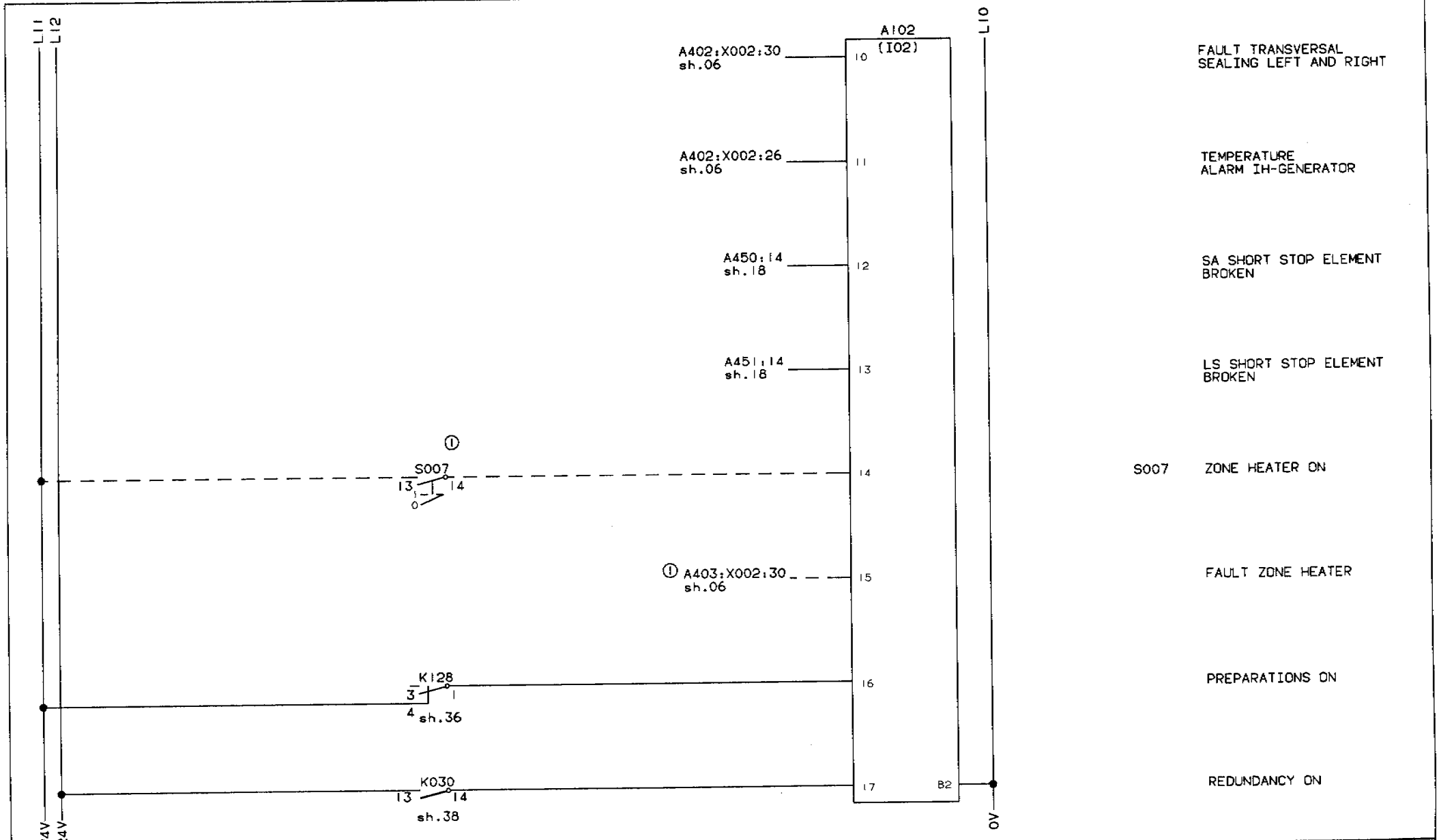

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JÅB	① EXTRA EQUIPMENT	DESCRIPTION: PLC-IN I02, OPERATION MONITORS	
ISSUE A					
AM NO. 20127				MACHINE: TBA/8-100V	44173-41:01
DATE PSL					
SIGN 931206			DRAWING REMARKS		

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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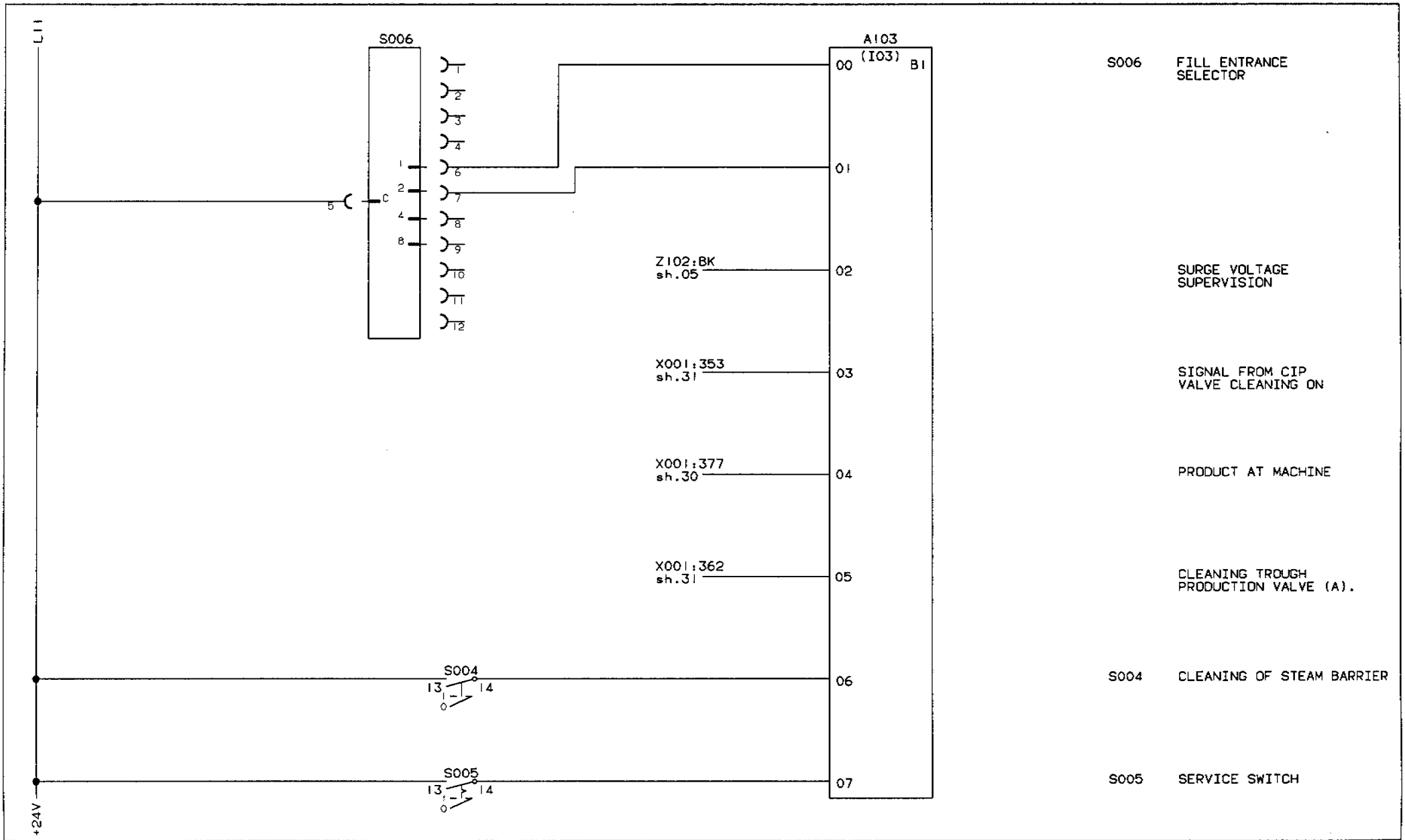

INTRODUCED WITH AM NO.	19666		DATE: 930630		SIGN. BWM/JÅB			DESCRIPTION: PLC-IN I03, SELECTORS	
ISSUE	A	B							
AM NO	20127	20588							
DATE	940203	941024						MACHINE: TBA/8-100V	44173-42:01
SIGN.	PSL	PSL					DRAWING REMARKS		

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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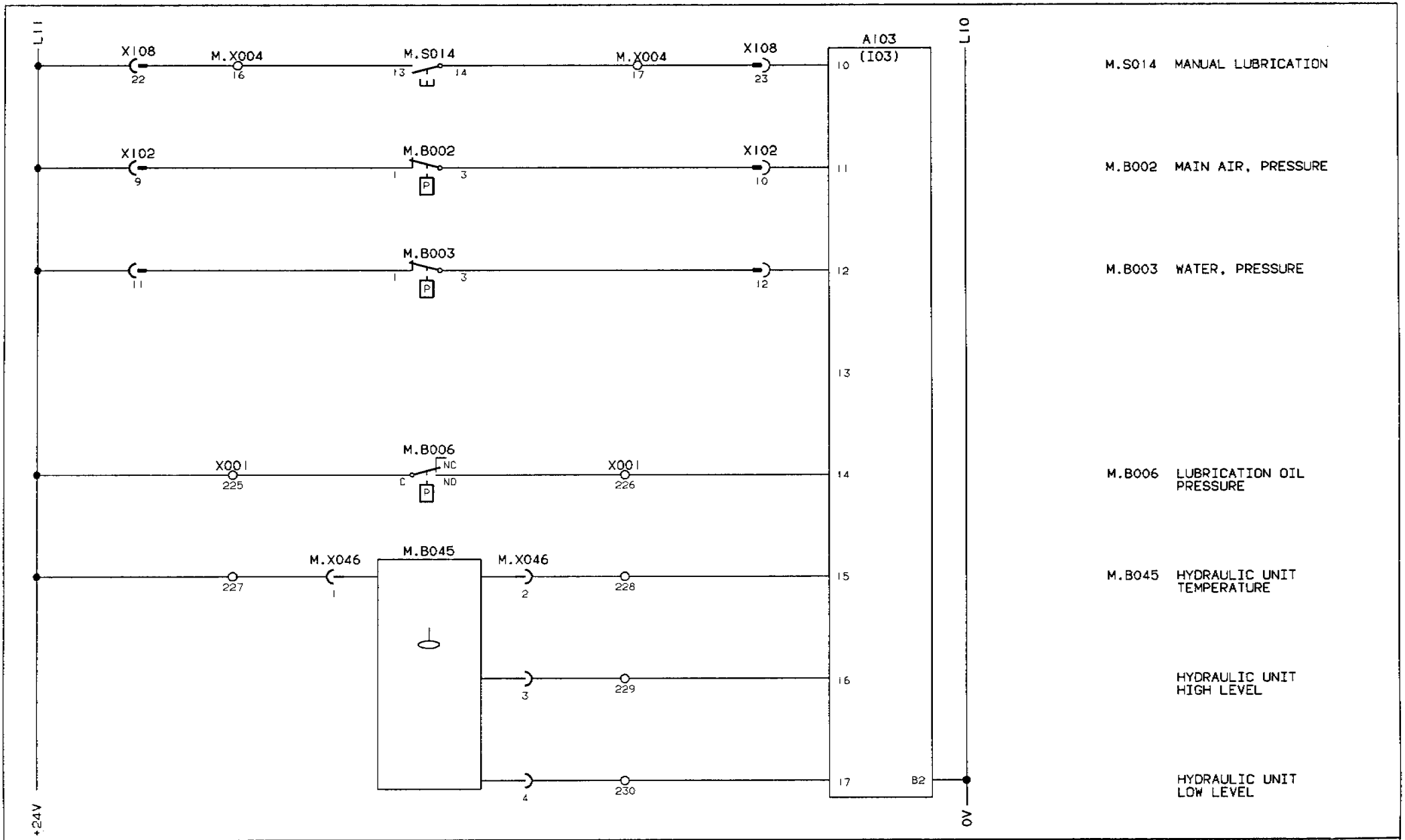

INCORPORATED WITH AM NO	19666	DATE 930630	SIGN. BWM/JÅB		DESCRIPTION: PLC-IN I03, OPERATIONS MONITORS
ISSUE	A				
AM NO.	20588				
DATE	941024				MACHINE: TBA/8-100V
SIGN.	PSL			DRAWING REMARKS	44173-43:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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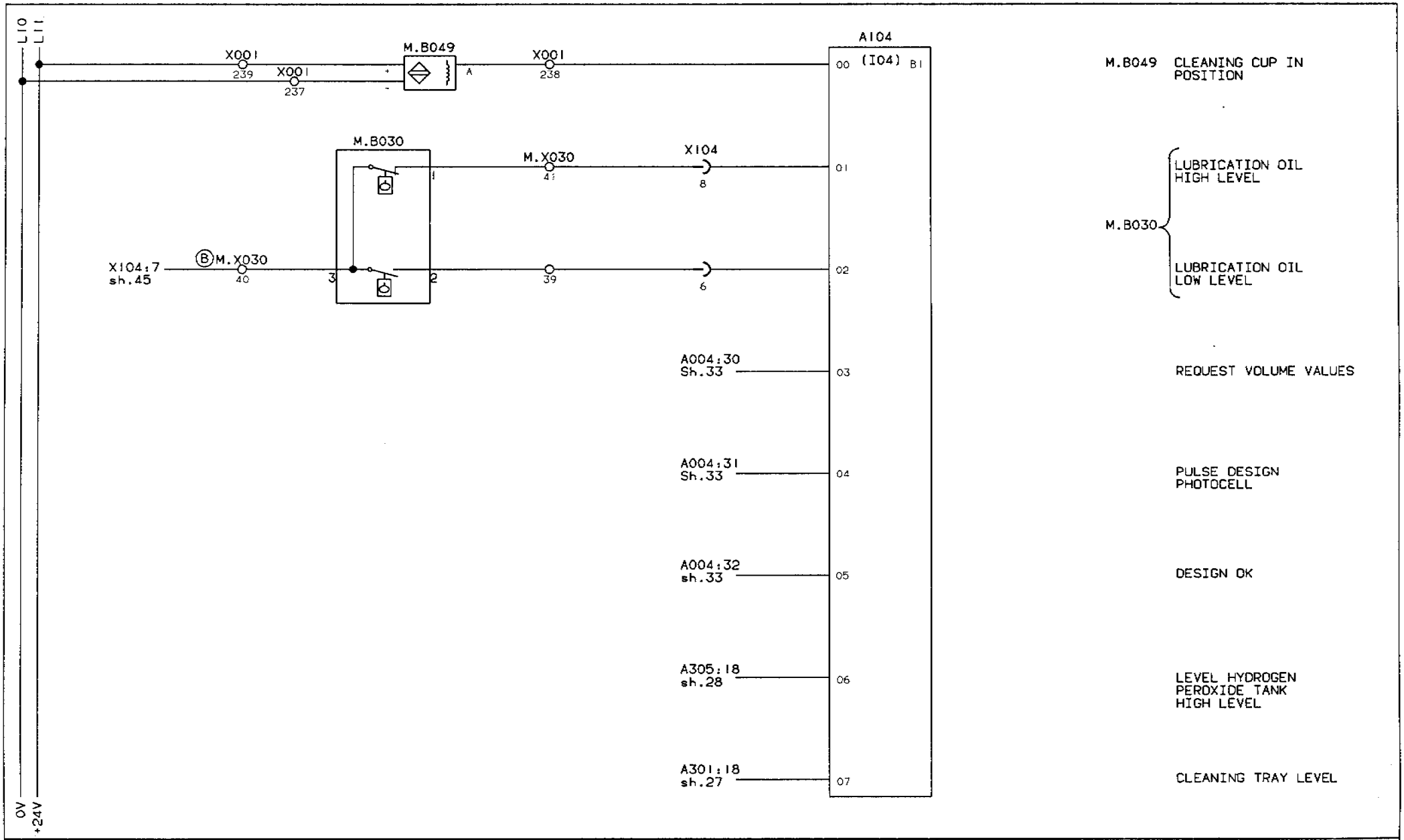

INTRODUCED WITH AM NO.	19666		DATE: 930630	SIGN BWM/JÅB				
ISSUE	A							
AM NO.	20127							
DATE	940202							
SIGN	PSL							

DRAWING REMARKS

DESCRIPTION: PLC-IN I04, OPERATION MONITORS

MACHINE: TBA/8-100V

44173-44:01

ALTERATIONS ONLY IN CADAM

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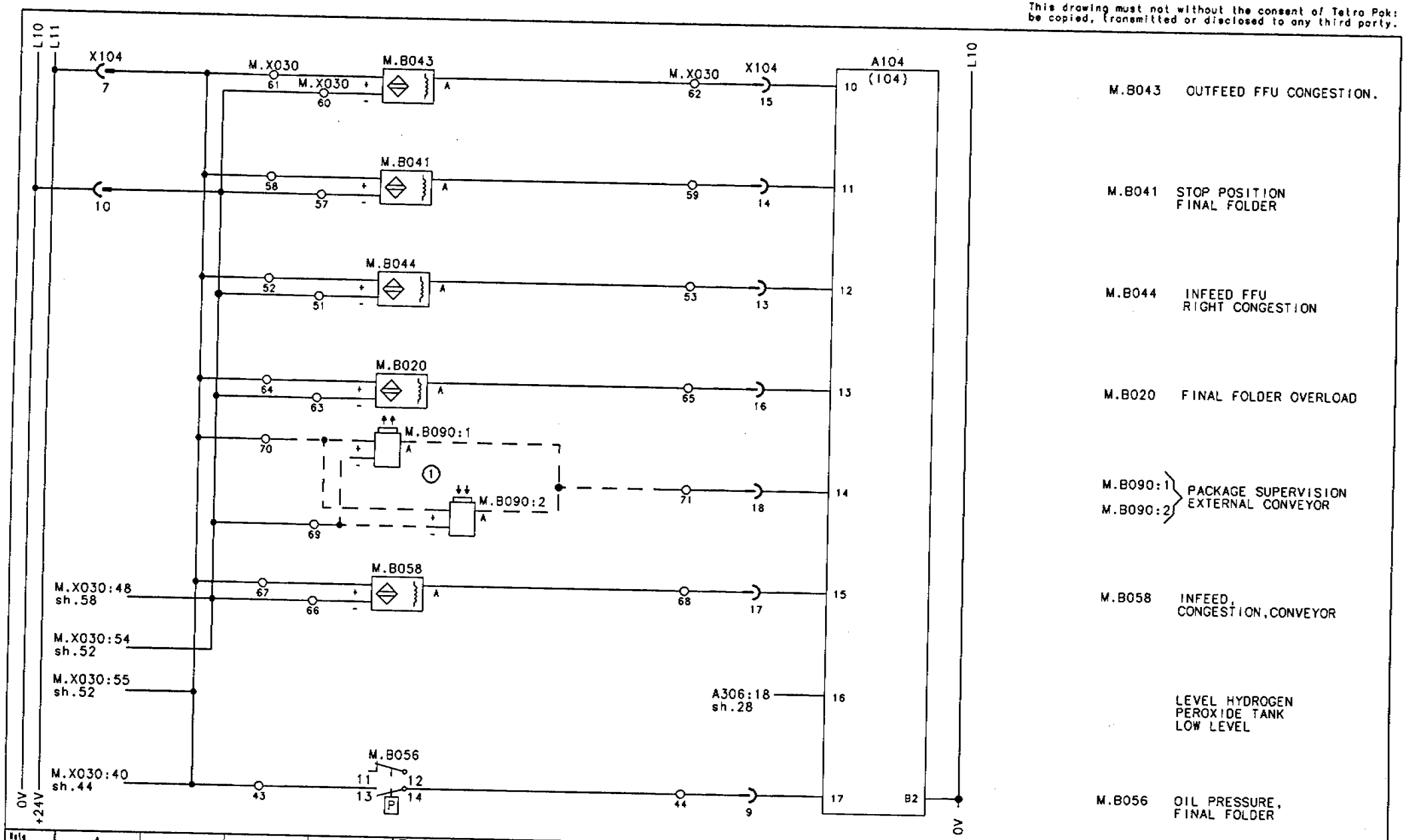

Note	A				① EXTRA EQUIPMENT
ECN No.	70684				
Sign./Date	FRM/970314				
Appr./Date	FRM/970314				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM Date 970314 | Approved FRM Date 970314 | Doc. class –

Machine: TBA/8-1000

Denomination: PLC-IN 104, OPERATION MONITORS

Drawing No: 44173-45:30

Page –

Tetra Pak
MODENA ITALY

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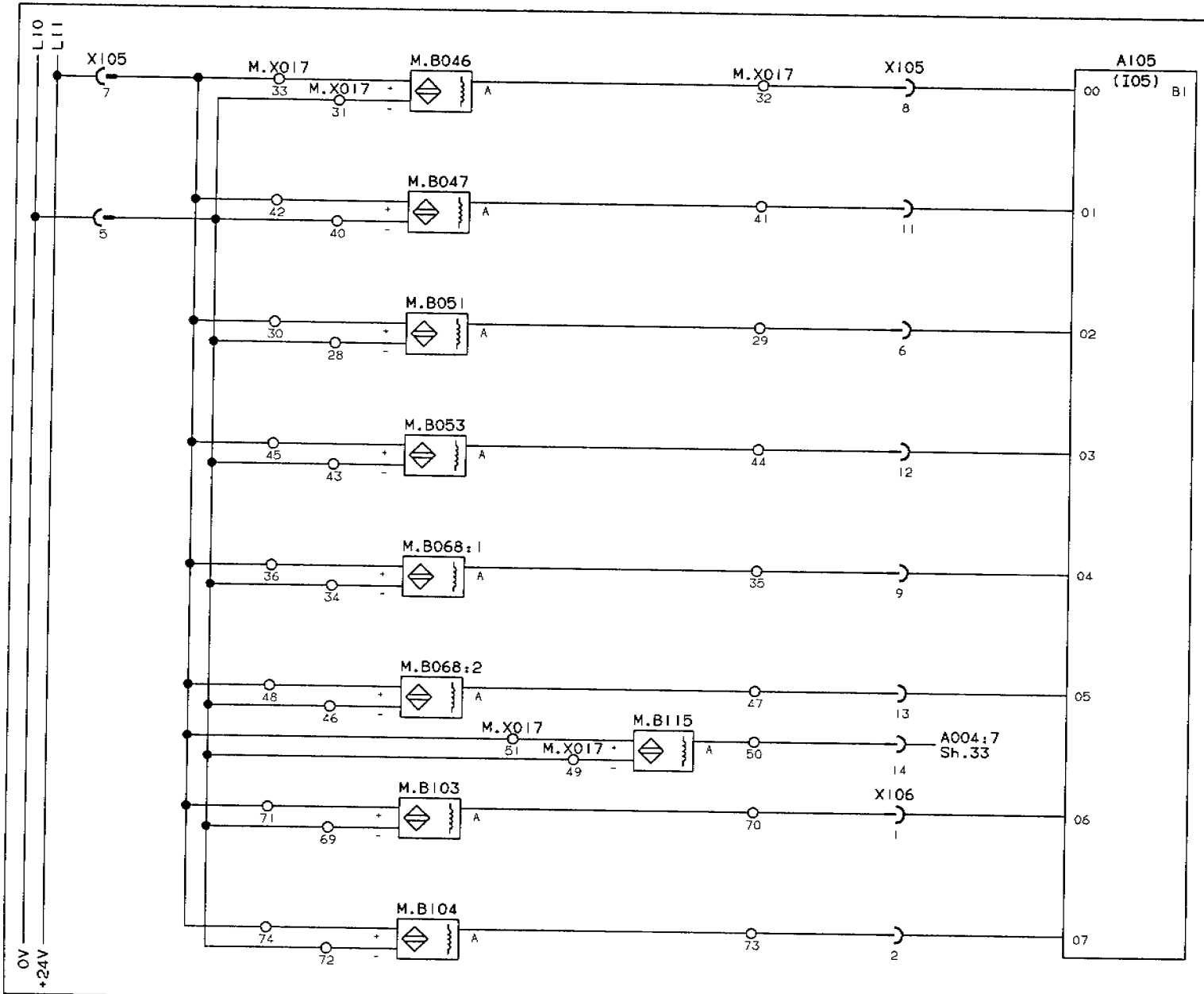

M.B046	SQUEE-GEE, ROLLER POSITION
M.B047	AIR KNIFE, POSITION
M.B051	PRODUCT PIPE, POSITION
M.B053	STERILE AIR VALVE (B) POSITION.
M.B068:1	CLEANING PIPE JET DIVERTER
M.B068:2	CLEANING PIPE B-VALVE
M.B115	BENDING ROLLER SPEED MONITOR
M.B103	STERILE AIR PIPE JET DIVERTER
M.B104	STERILE AIR PIPE B-VALVE

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JÅB	
ISSUE A			DESCRIPTION: PLC-IN I05, OPERATION MONITORS
AM NO. 20127			
DATE 940201			MACHINE: TBA/8-100V
SIGN. PSL		DRAWING REMARKS	44173-46:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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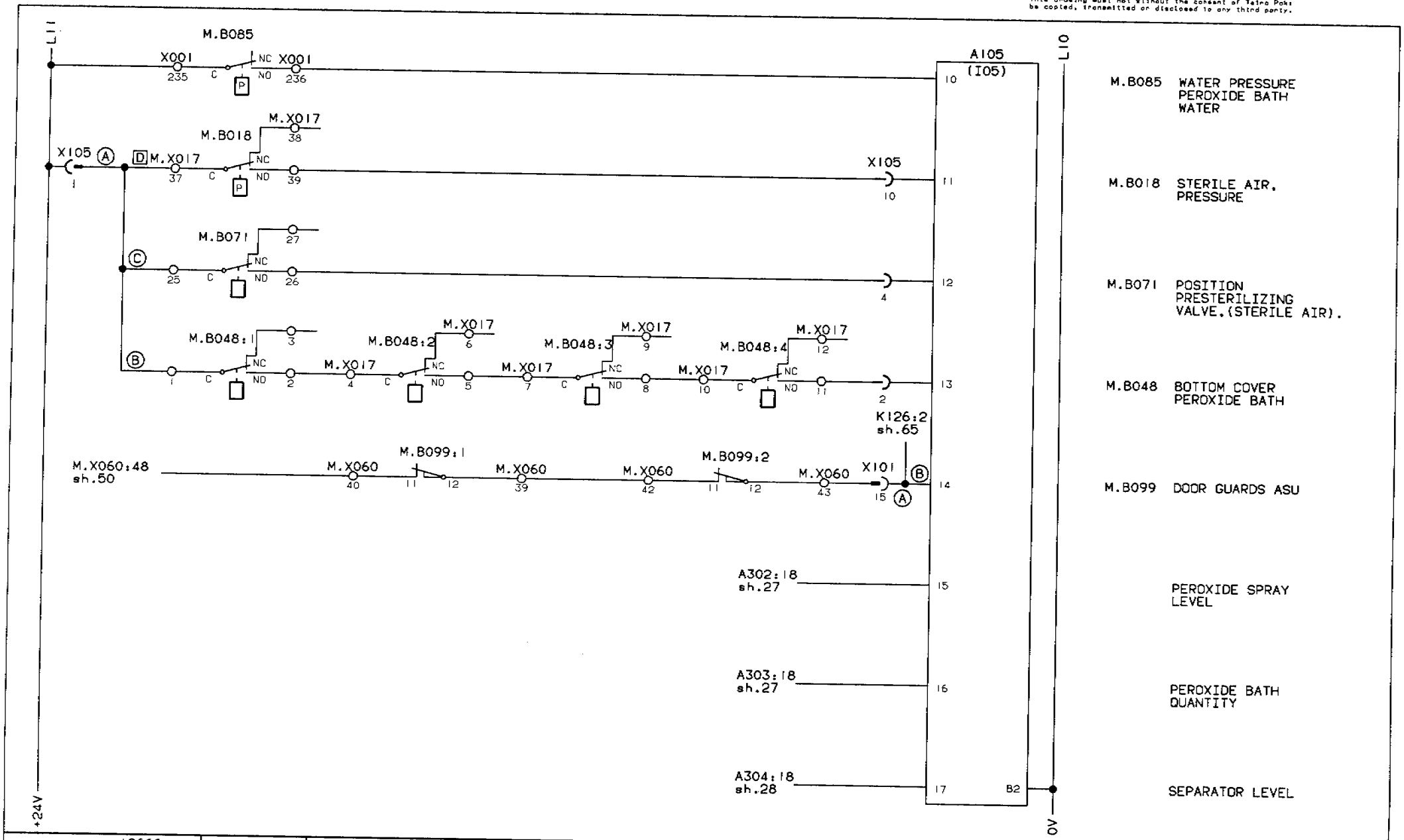

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JÅB				
ISSUE	A						
AM NO	20588						
DATE	941024						
SIGN.	PSL						

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PLC-IN I05, OPERATIONS MONITORS

MACHINE: TBA/8-100V

44173-47:01

Tetra Pak
LUND SWEDEN

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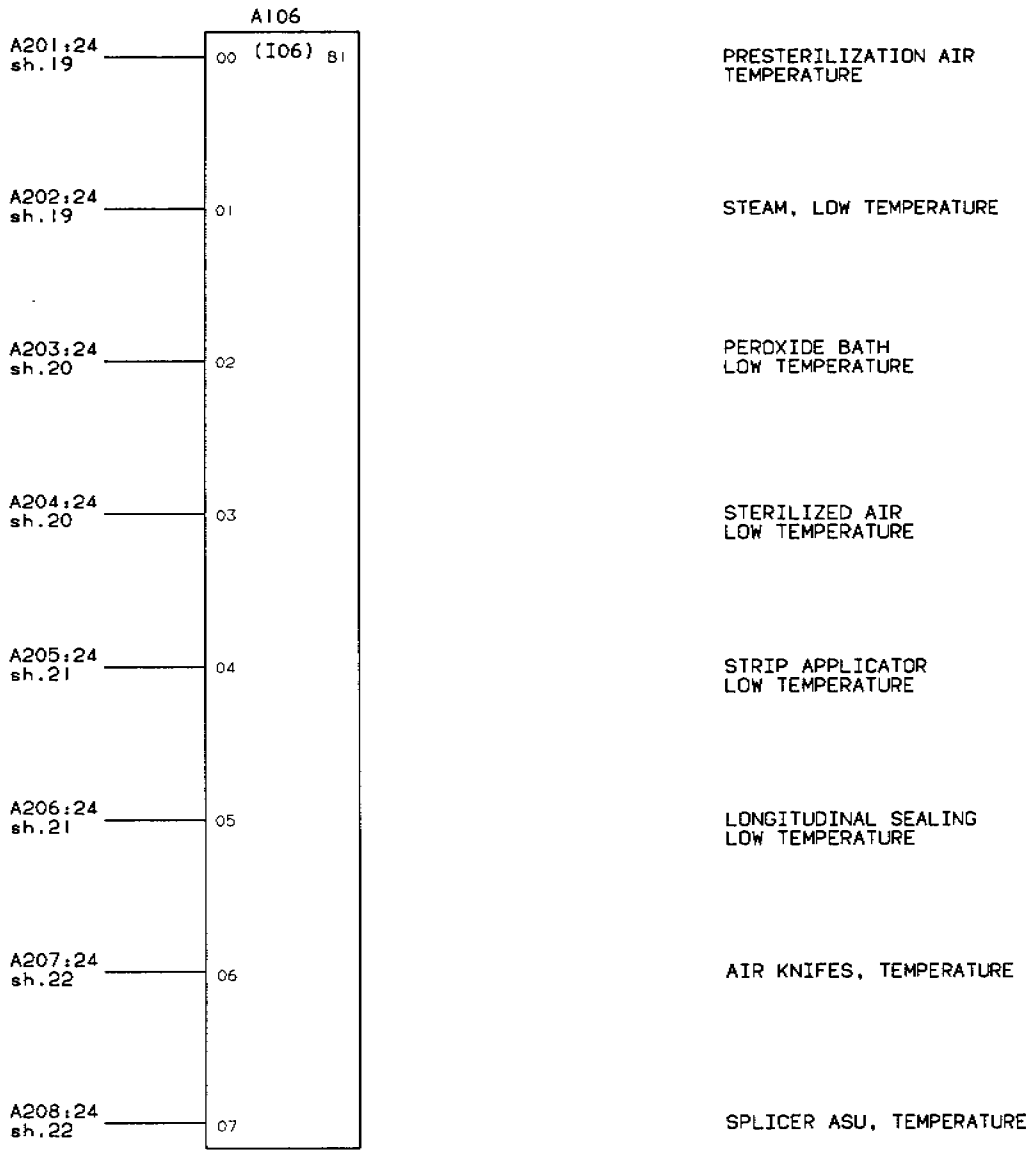

INTRODUCED WITH AM NO.	19666		DATE 930630		SIGN. BWM/JÅB			
ISSUE								
AM NO.								
DATE								
SIGN.								DRAWING REMARKS

DESCRIPTION: PLC-IN I06, SIGNALS

MACHINE: TBA/8-100V

44173-48:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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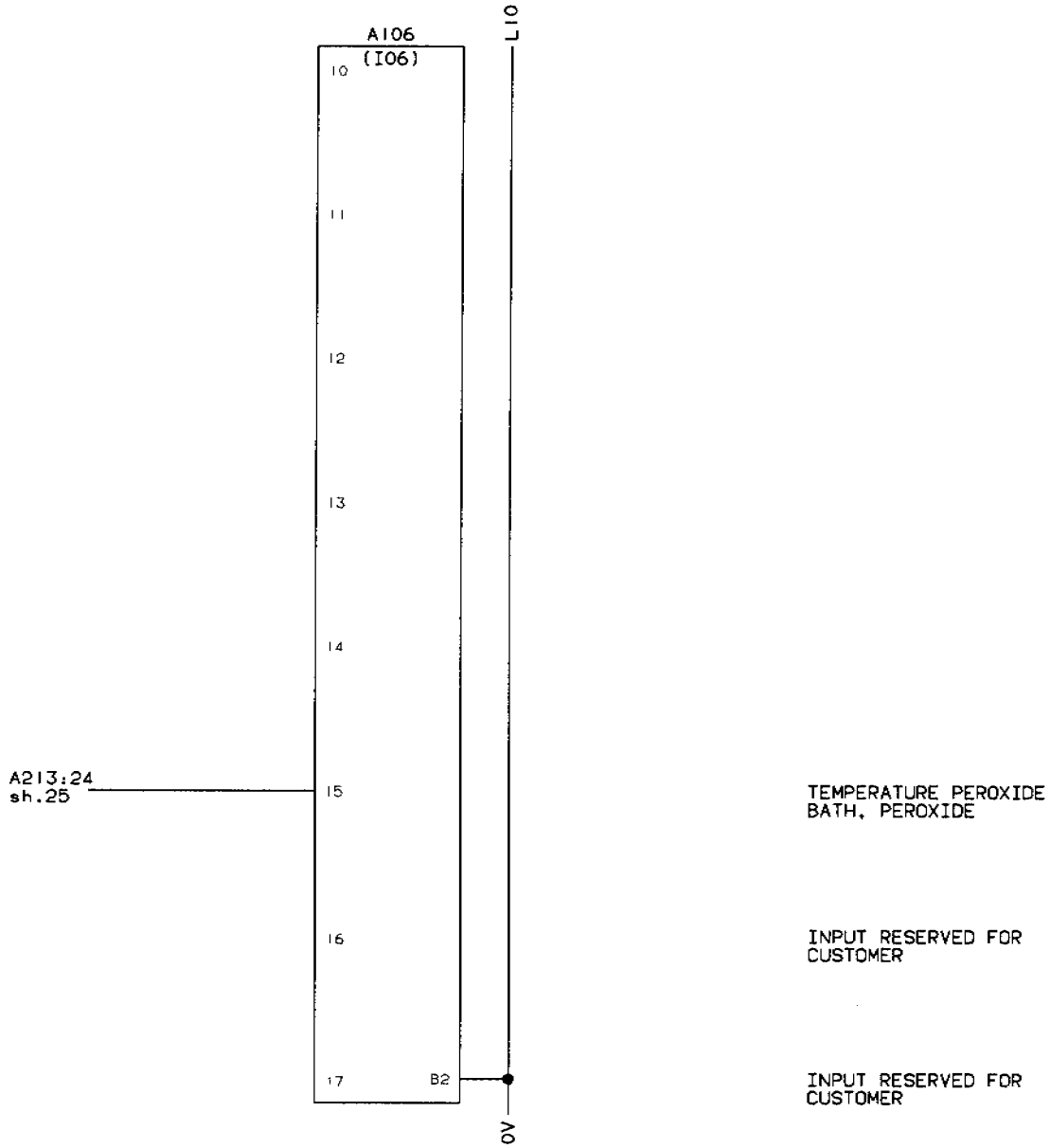

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN. BWM/JÅB			
ISSUE									
AM NO									
DATE									
SIGN									

DRAWING REMARKS

DESCRIPTION: PLC-IN I06

MACHINE: TBA/8-100V

44173-49:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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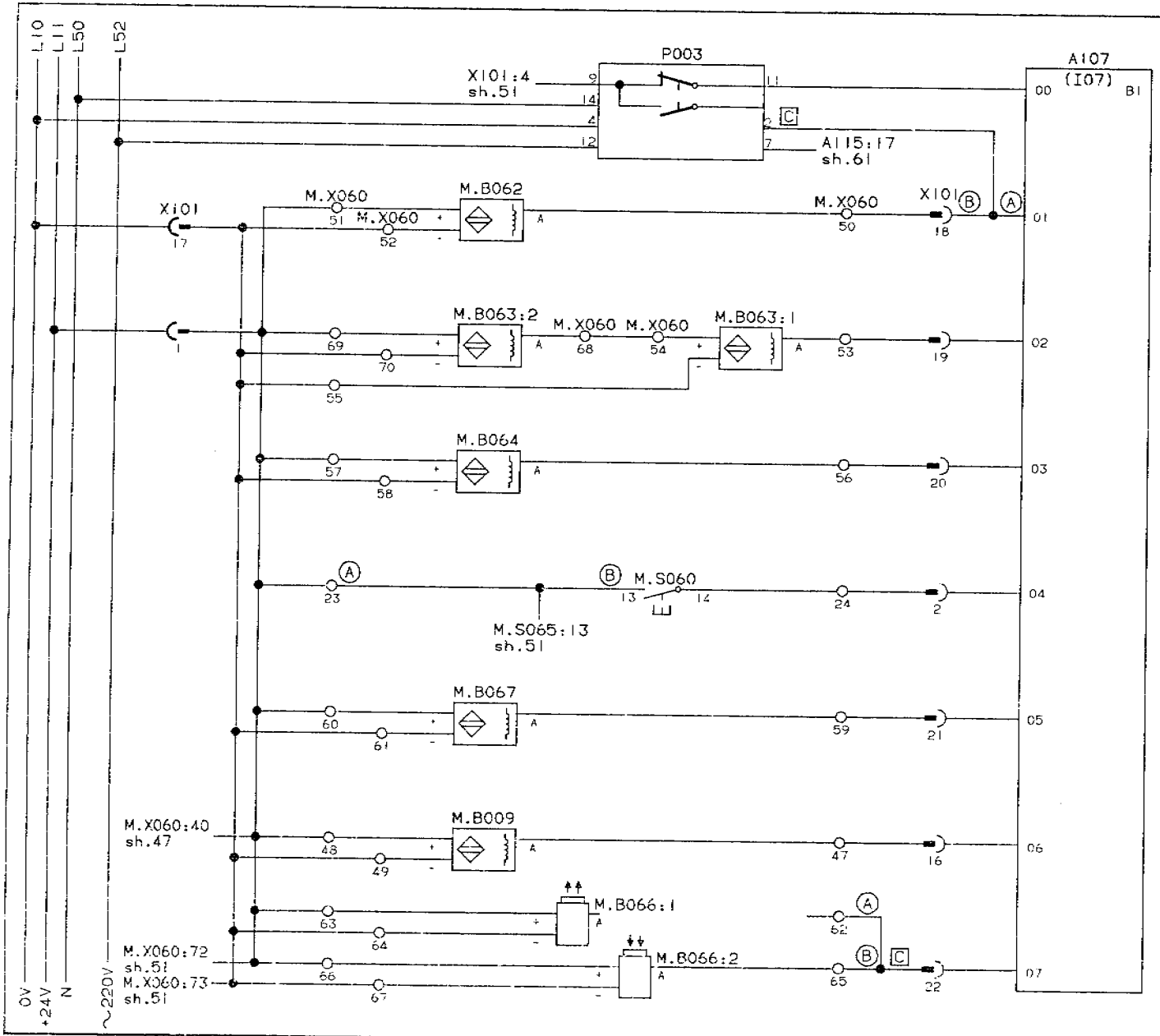

P003	DOWN COUNTER PAPER SUPPLY
M.B062	CREASE WHEEL POSITION
M.B063:1 M.B063:2	PAPER FOR SPLICER
M.B064	LOWER SLACK SUPPLY
M.S060	MANUAL SPLICING
M.B067	UPPER SLACK SUPPLY
M.B009	ROTATION MONITOR
M.B066:1 M.B066:2	PAPER SUPPLY

INTRODUCED WITH AM NO. 70003	DATE 960206	SIGN. PGI	
DESCRIPTION: PLC-IN I07, OPERATION MONITORS			
MACHINE: TBA/8-100V			44173-50:21

DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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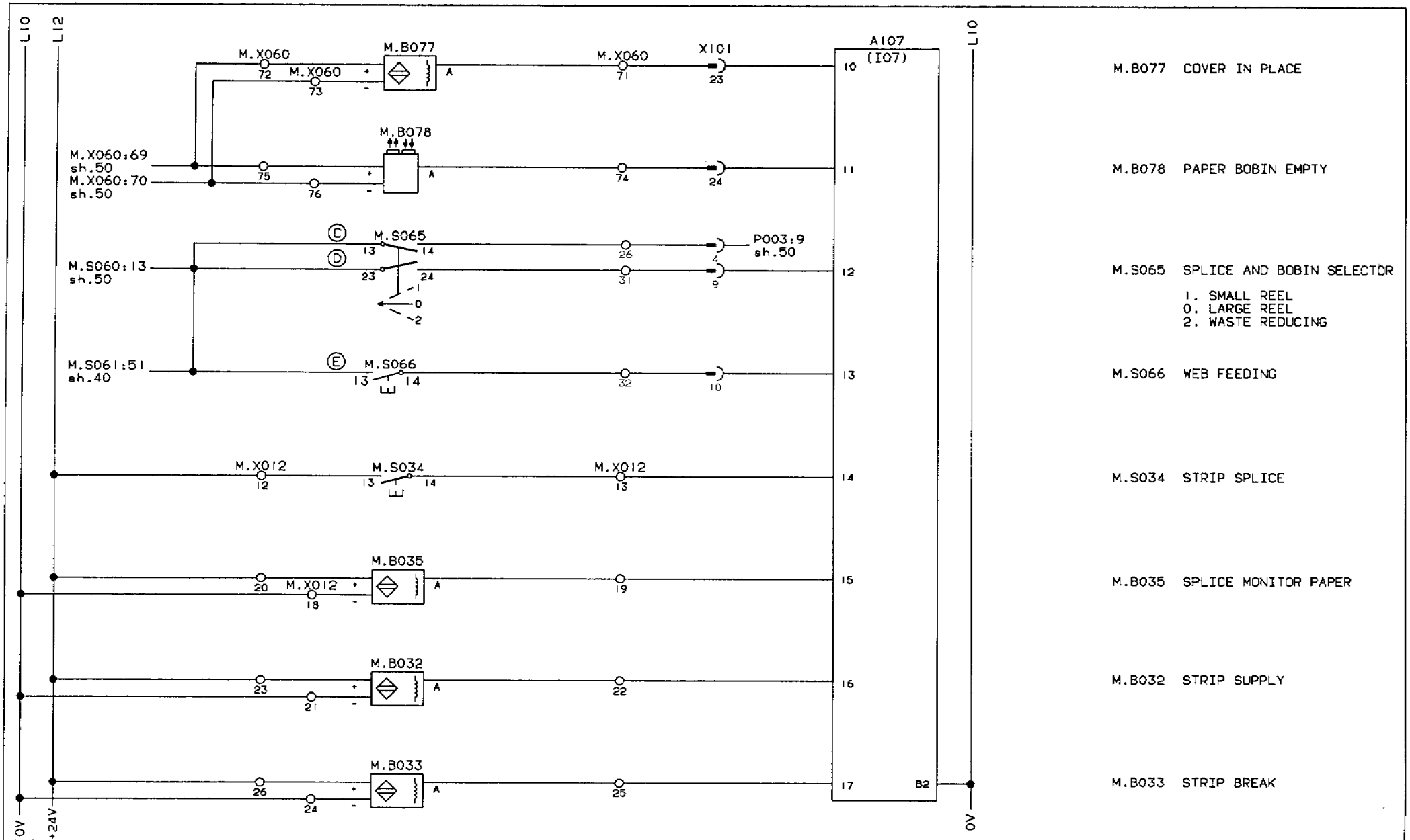

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN: BWM/JÅB		
ISSUE	A				
AM NO.	20127				
DATE	940204				
SIGN	PSL			DRAWING REMARKS	

DESCRIPTION: PLC-IN I07, OPERATION MONITOR

MACHINE: TBA/8-100V

44173-51:01

ALTERATIONS ONLY IN CADAM

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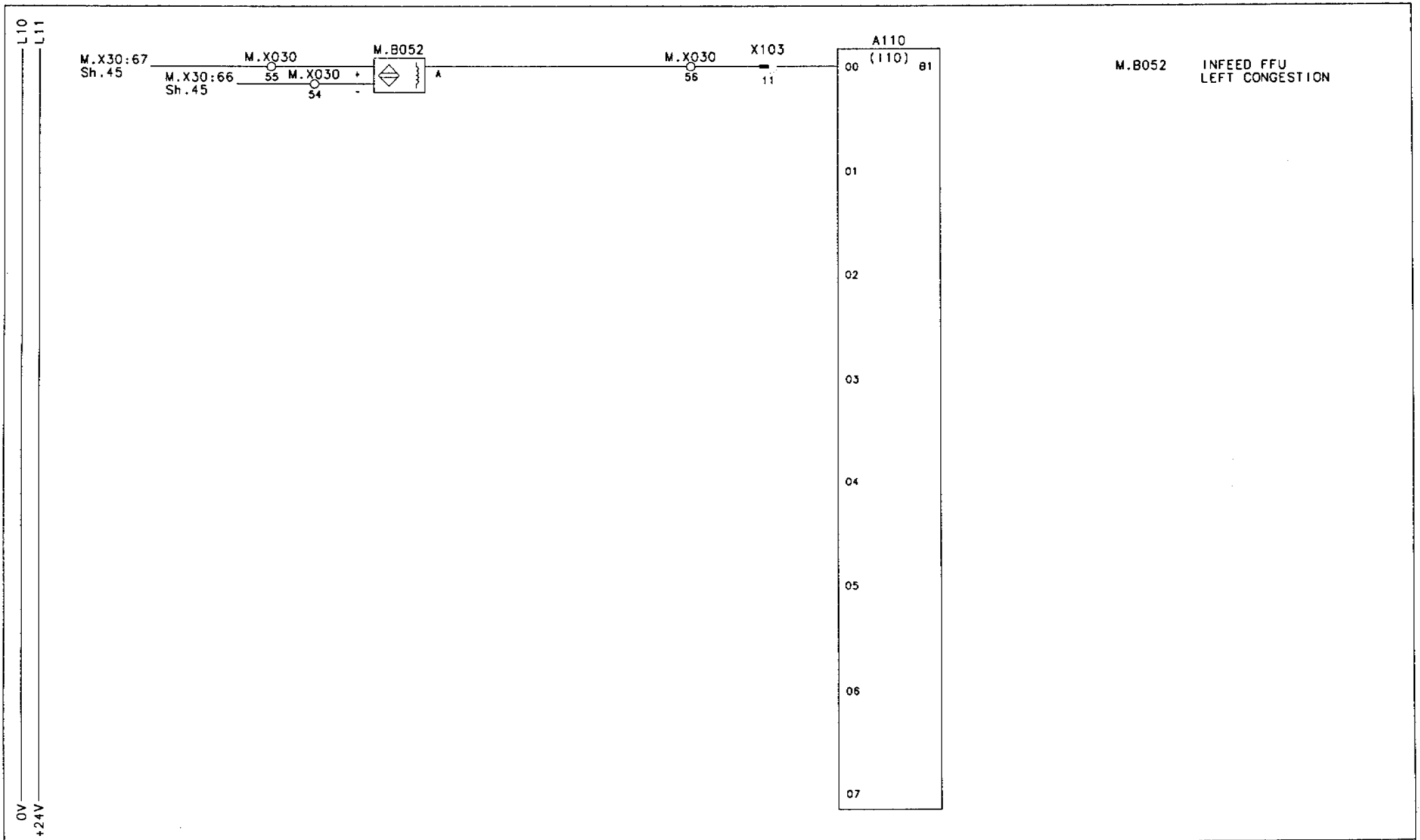

Note	A					Tetra Pak	Designer FRM	Date 970314	Approved FRM	Date 970314	Doc. class -
ECN No.	70684						Machine TBA/8-1000	Description PLC-IN 110, OPERATION MONITORS			
Sign./Date	FRM/970314					Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-52:30			Page -	
Appr./Date	FRM/970314				Drawing remarks						

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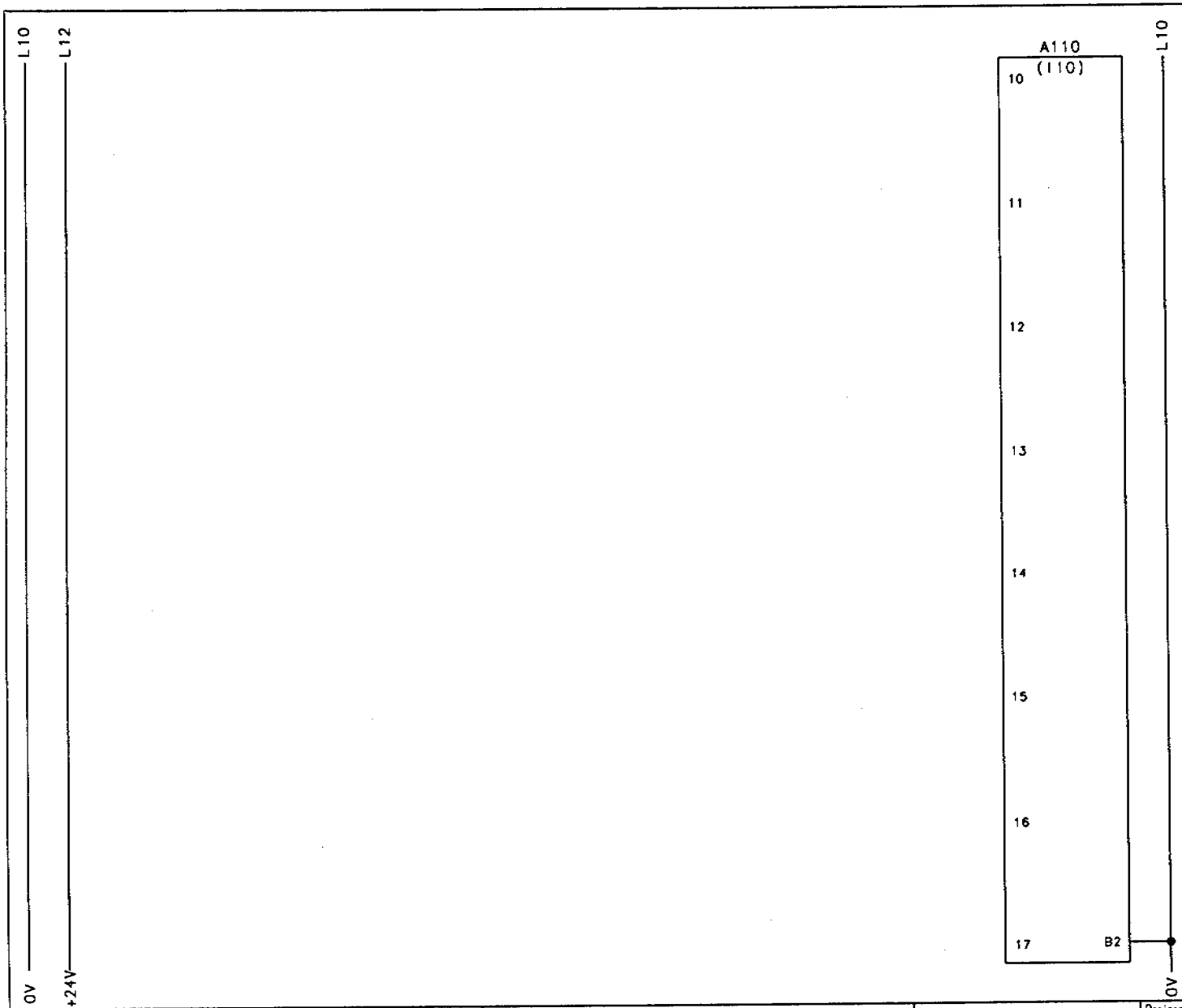

Note	A				
ECN No.	70684				
Sign./Date	FRM/970314				
Appr./Date	FRM/970314				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM	Date 970314	Approved FRM	Date 970314
Machine TBA/8-1000	Denomination PLC-IN 110, OPERATION MONITOR		Doc. class –
Drawing No 44173-53:30			Page –

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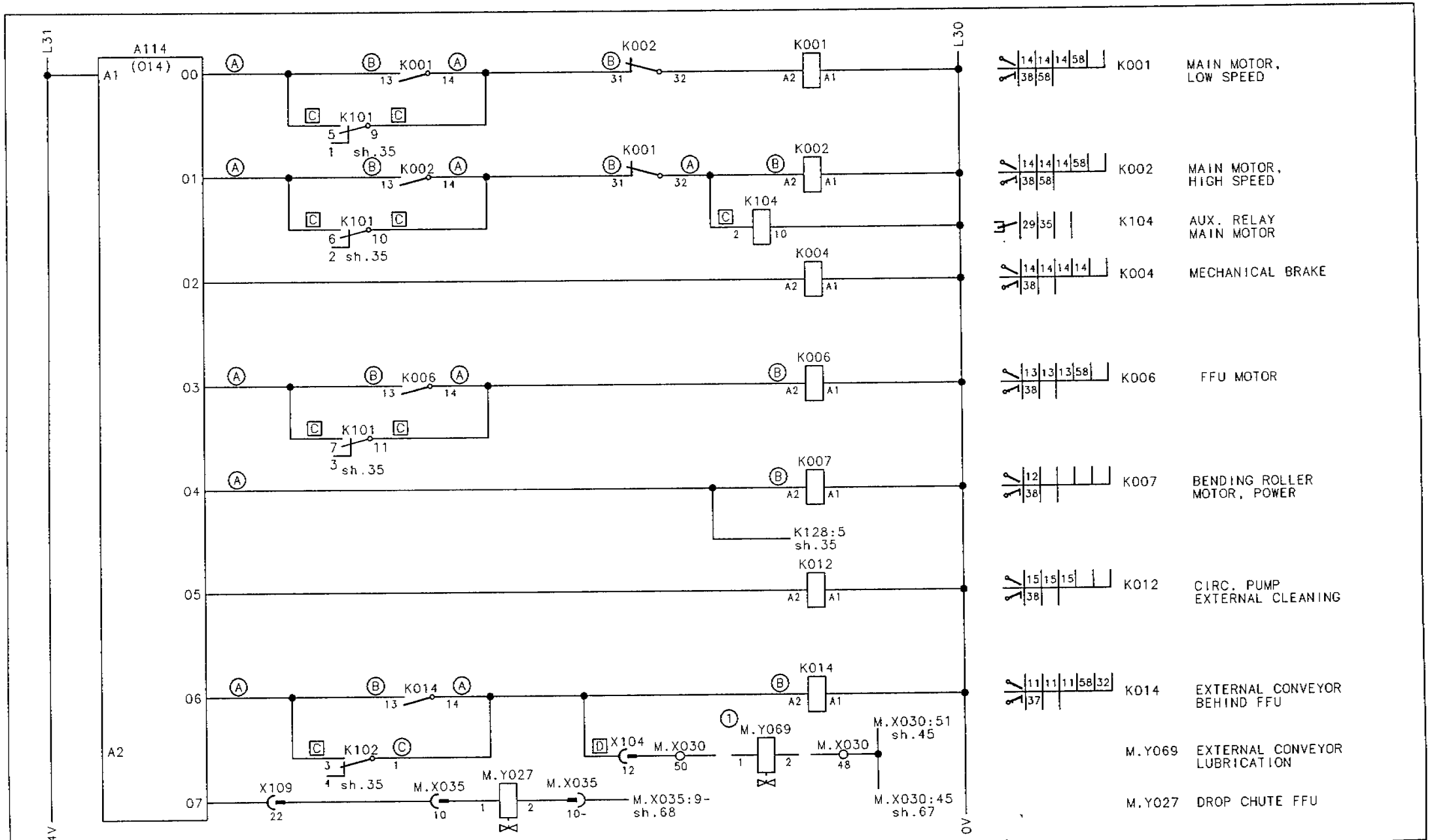


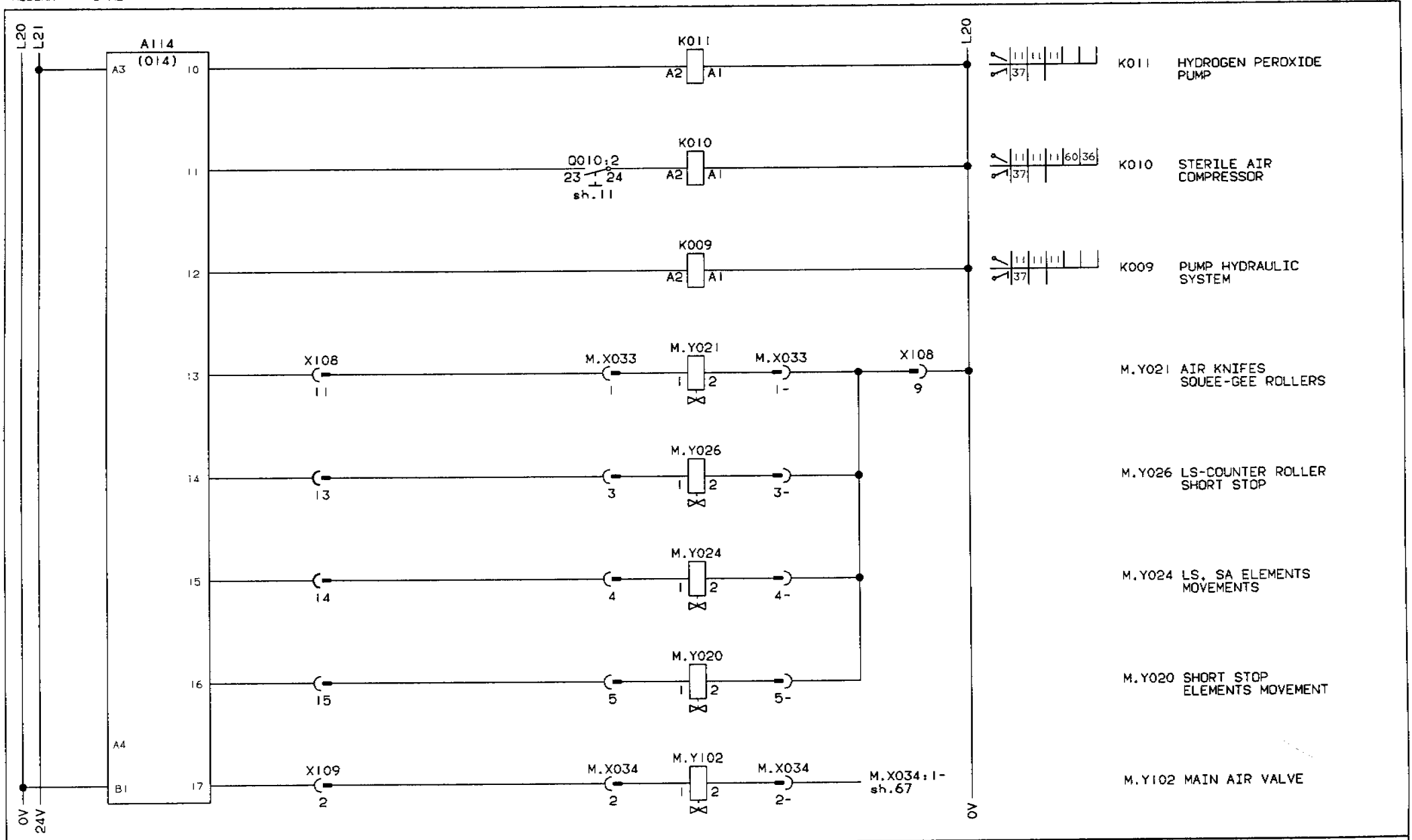
Note	A				① EXTRA EQUIPMENT
ECN No.	71182				
Sign./Date	DBI/971030				
Appr./Date	PGI/971030				Drawing remarks

Tetra Pak

Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –	
Machine TBA/8-1000	Denomination PLC-OUT 014, CONTACTORS				
Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-58:37	Page –			

Tetra Pak
MODENA ITALY

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN. BWM/JAB	DESCRIPTION: PLC-OUT 014	
ISSUE	A			MACHINE: TBA/8-100V	44173-59:01
AM NO.	20127				
DATE	940117				
SIGN	PSL			DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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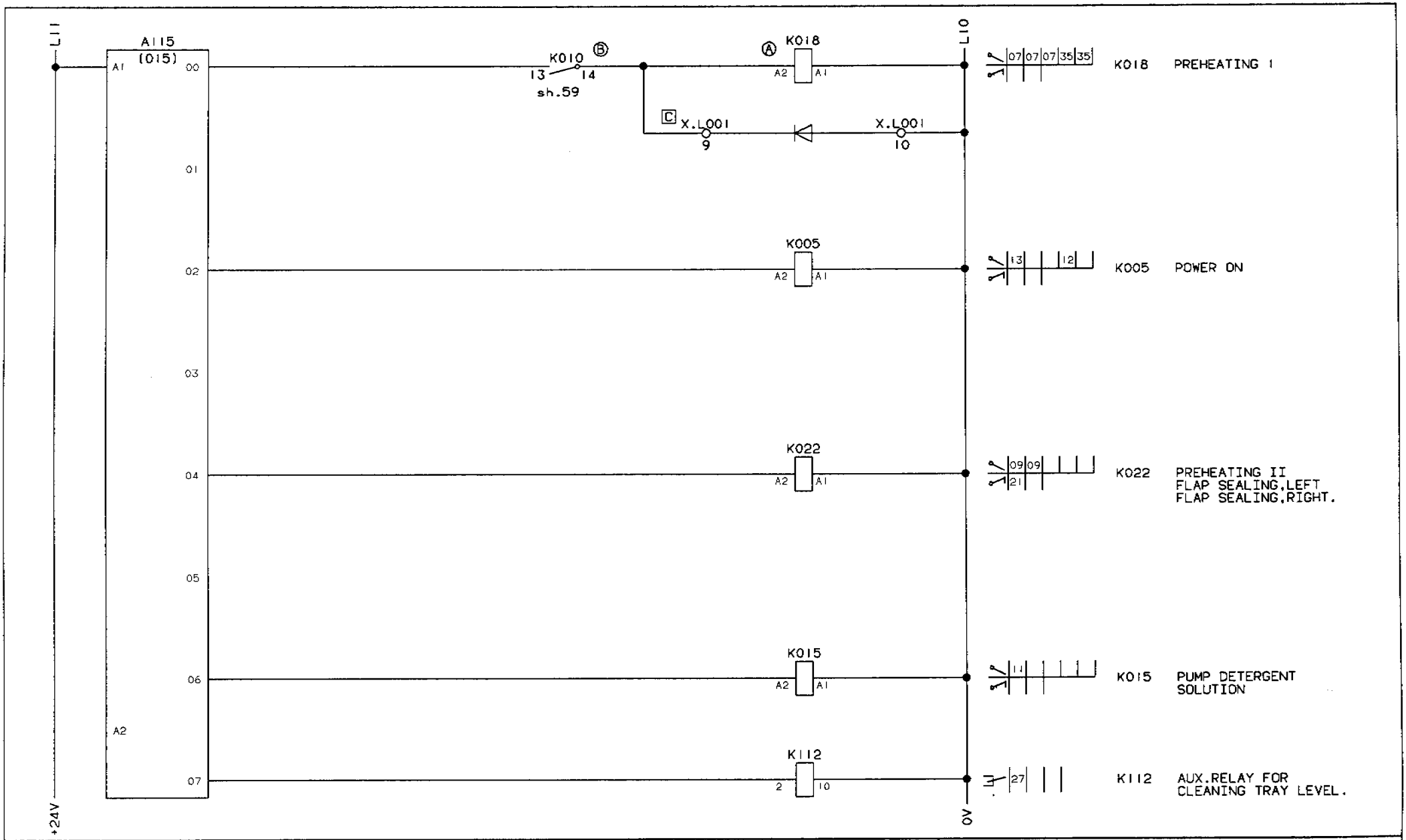

INTRODUCED WITH AM NO.	19666		DATE: 930630	SIGN: BWM/JÅB				
ISSUE	A	B						
AM NO.	20127	20588						
DATE	940203	941024						
SIGN	PSL	PSL						

DRAWING REMARKS

DESCRIPTION: PLC-OUT 015, CONTACTORS

MACHINE: TBA/8-100V

44173-60:01

ALTERATIONS ONLY IN CADAM

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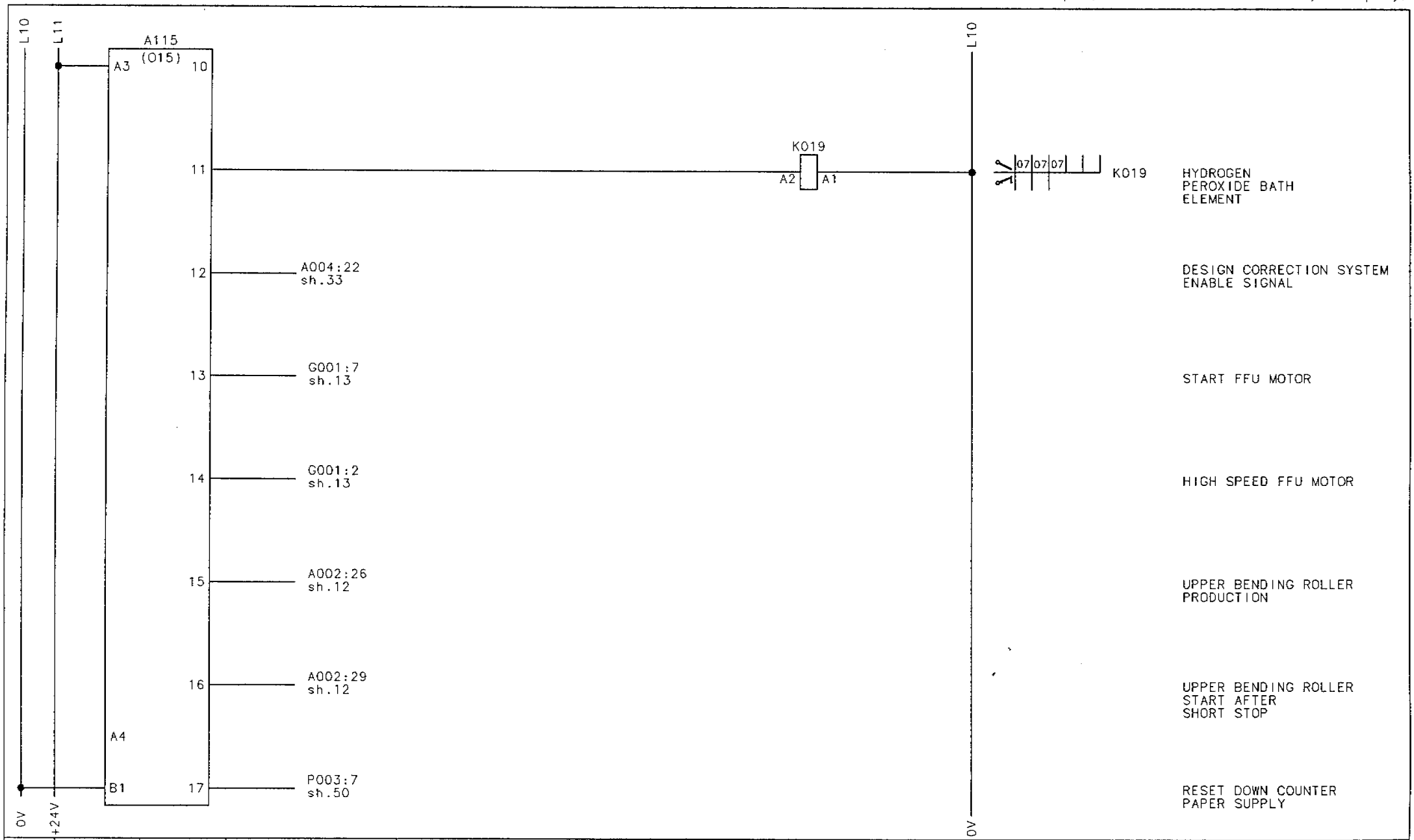

Note	A				
ECN No.	71182				
Sign./Date	DBI/971030				
Appr./Date	PGI/971030				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –	
Machine TBA/8-1000	Denomination PLC-OUT 015, CONTROL SIGNALS				
Drawing No 44173-61:37				Page –	

Tetra Pak
MODENA ITALY

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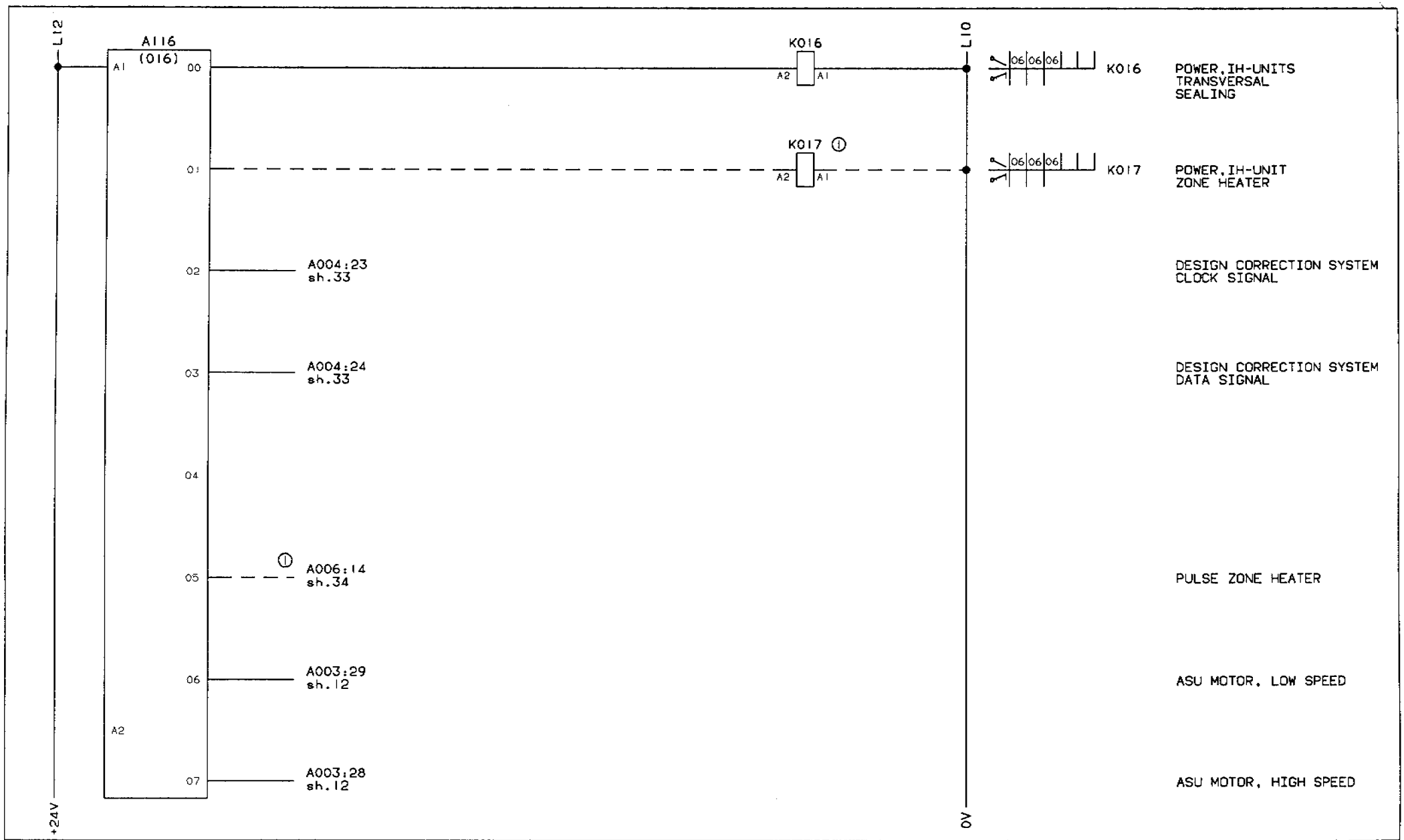

INTRODUCED WITH AM NO.	19666		DATE: 930630	SIGN. BWM/JÅB		① EXTRA EQUIPMENT	DESCRIPTION: PLC-OUT 016, IH-GENERATORS
ISSUE	A	B					
AM NO.	20127	20588					MACHINE: TBA/8-100V
DATE	940202	941024					44173-62:01
SIGN	PSL	PSL				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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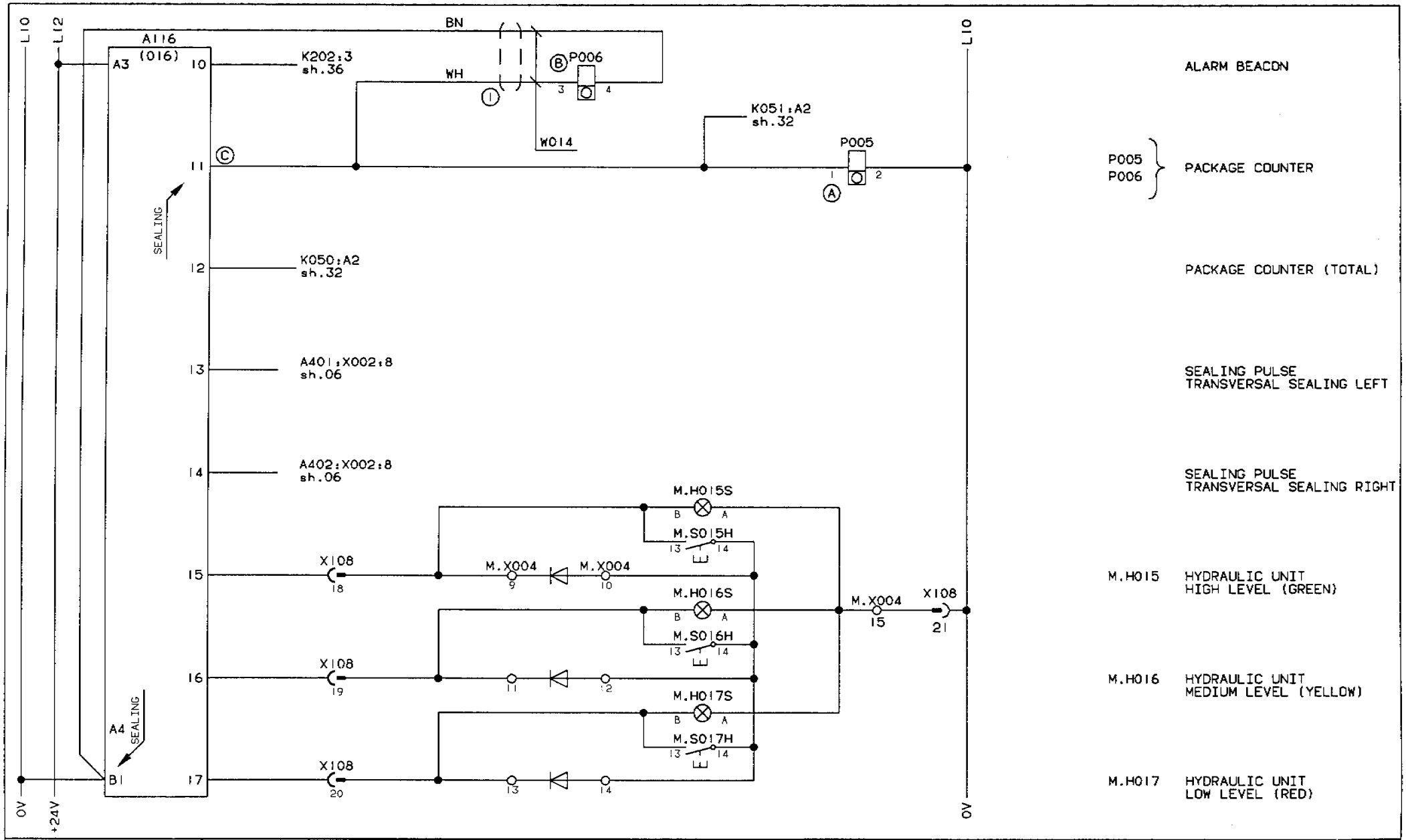

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÅB	① CONNECT THE SHIELD TO SCREW NEAR P006	DESCRIPTION: PLC-OUT 016, CONTROL SIGNALS
ISSUE	A	B			
AM NO	20127	20588			
DATE	940204	941024			MACHINE: TBA/8-100V
SIGN	PSL	PSL		DRAWING REMARKS	44173-63:01

ALTERATIONS ONLY IN CADAM

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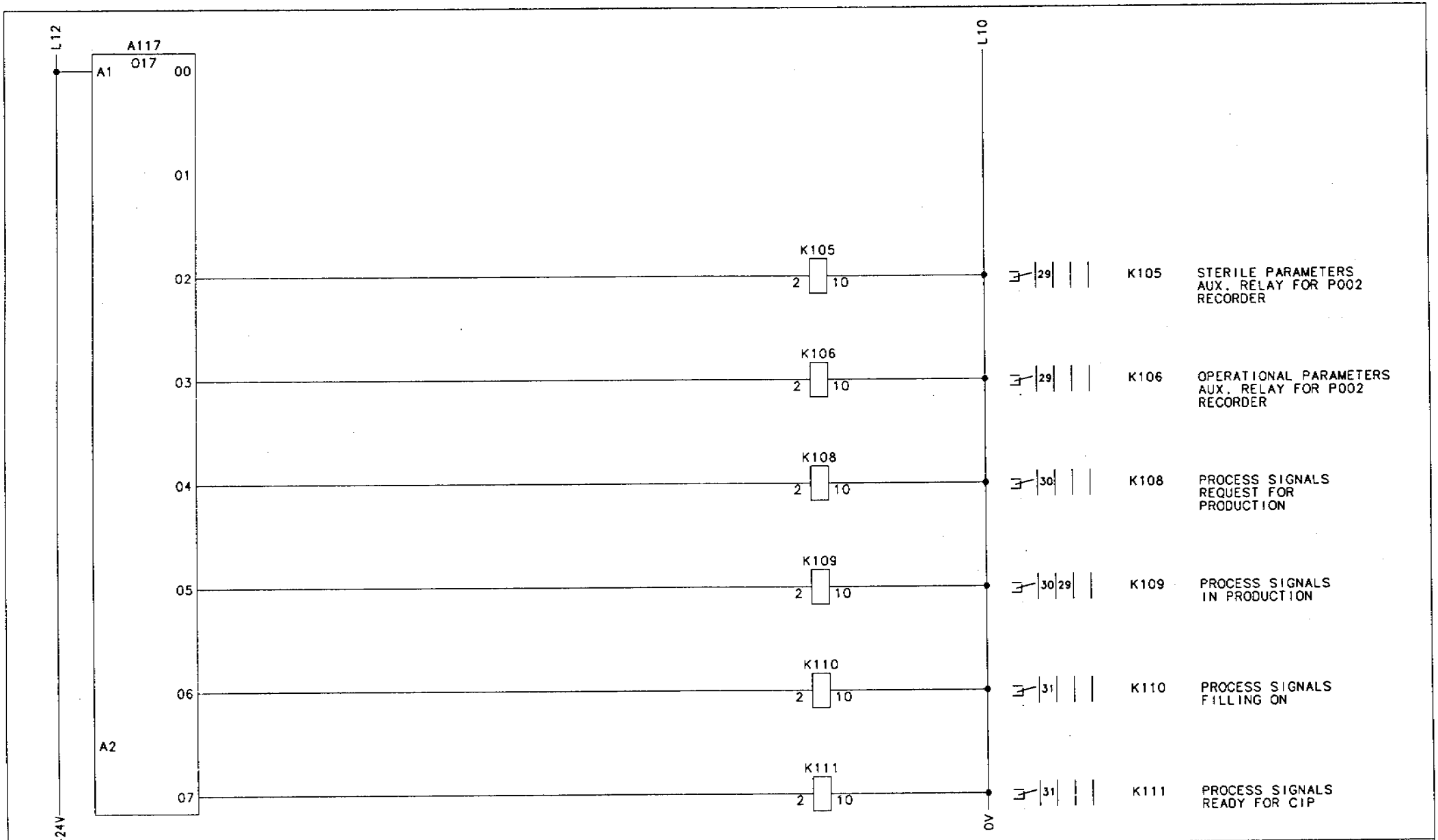

Note	A					Tetra Pak	Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
ECN No.	71023						Machine TBA/8-1000	Designation PLC-OUT O17, CONTROL SIGNALS			
Sign./Date	DBI/970901					Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-64:36			Page –	
Appr./Date	DBI/970901				Drawing remarks						

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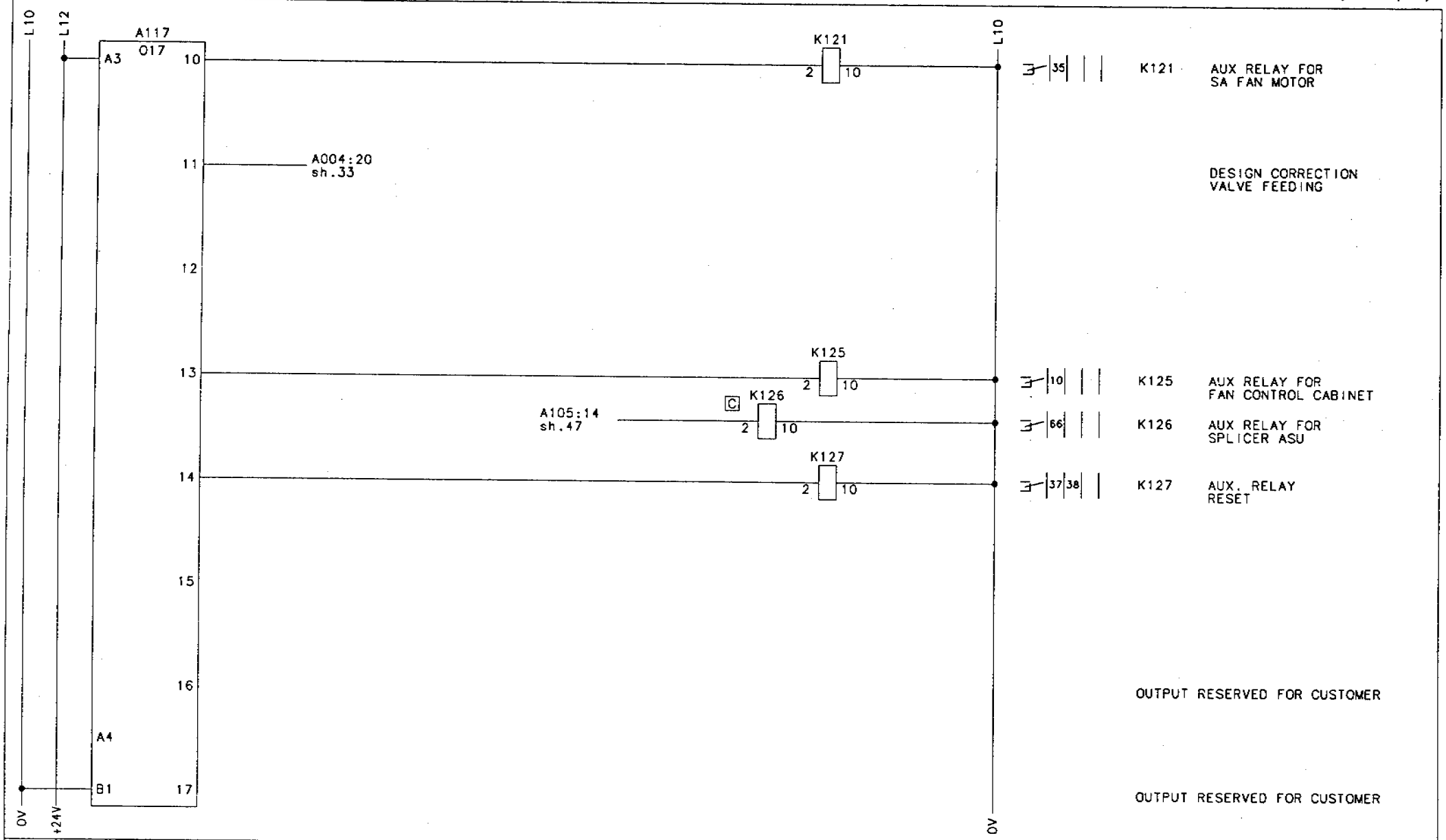

Note	A				
ECN No.	71023				
Sign./Date	DBI/970901				
Appr./Date	DBI/970901				Drawing remarks

Tetra Pak

Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –	
Machine TBA/8-1000	Denomination PLC-OUT O17, CONTROL SIGNALS				
Company Tetra Brik R.& D. S.p.A.	Drawing No 44173-65:36			Page –	

Tetra Pak
MODENA ITALY

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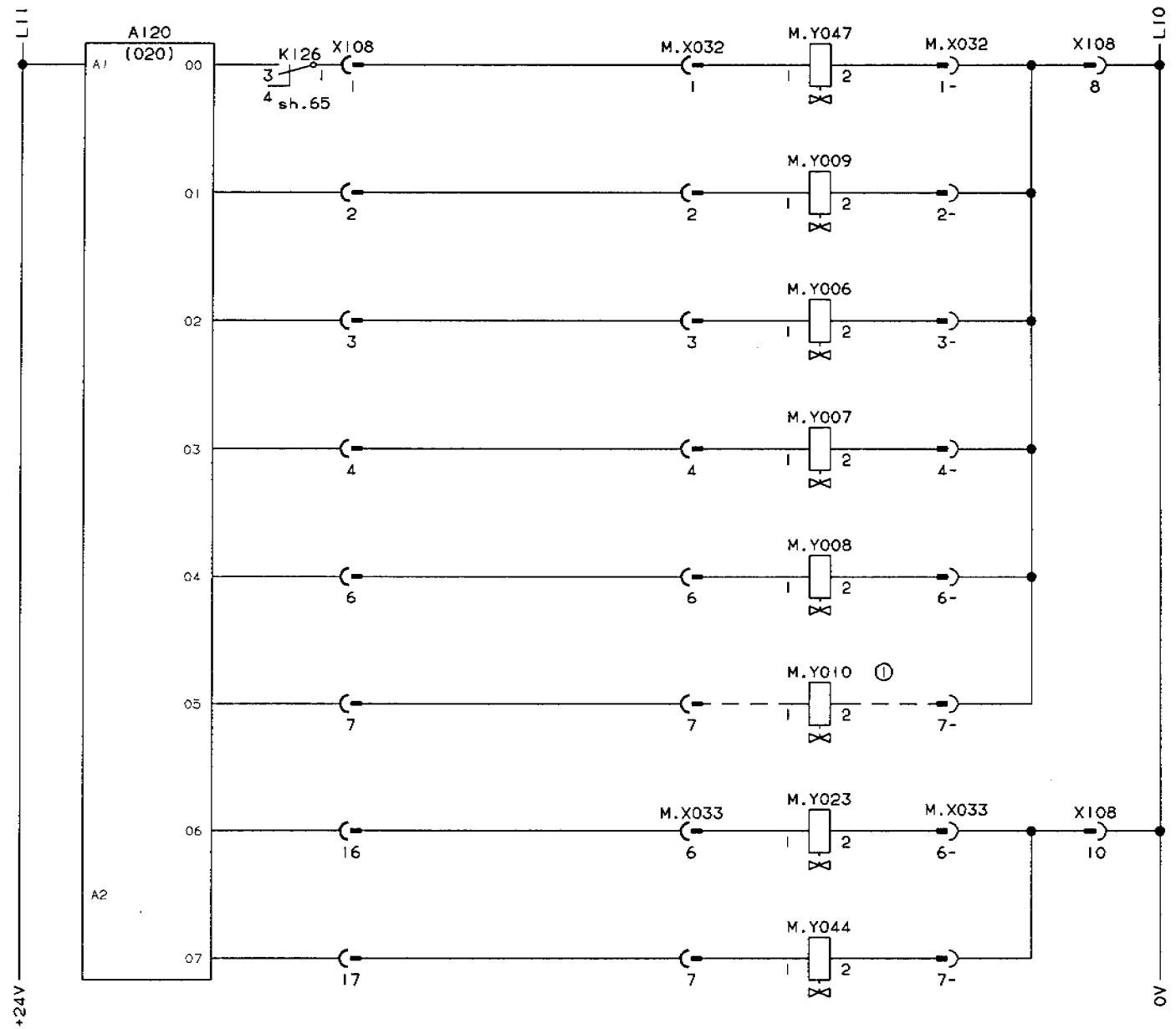

M.Y047 SPLICER PRESSURE JAW ASU

M.Y009 PRODUCT VALVE (A)

M.Y006 PEROXIDE BATH DRAINING FILLING

M.Y007 STEAM BARRIER VALVE (C)

M.Y008 STERILE AIR VALVE (B)

M.Y010 STEAM PIPE VALVE

M.Y023 SUCTION VALVE

M.Y044 PREHEATING AIR INLET AND HEAT EXCHANGER

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JAB	① EXTRA EQUIPMENT
ISSUE A			
AM NO. 20127			
DATE 940117			
SIGN PSL			DRAWING REMARKS

DESCRIPTION: PLC-OUT 020, UPPER VALVE PANEL

MACHINE: TBA/8-100V

44173-66:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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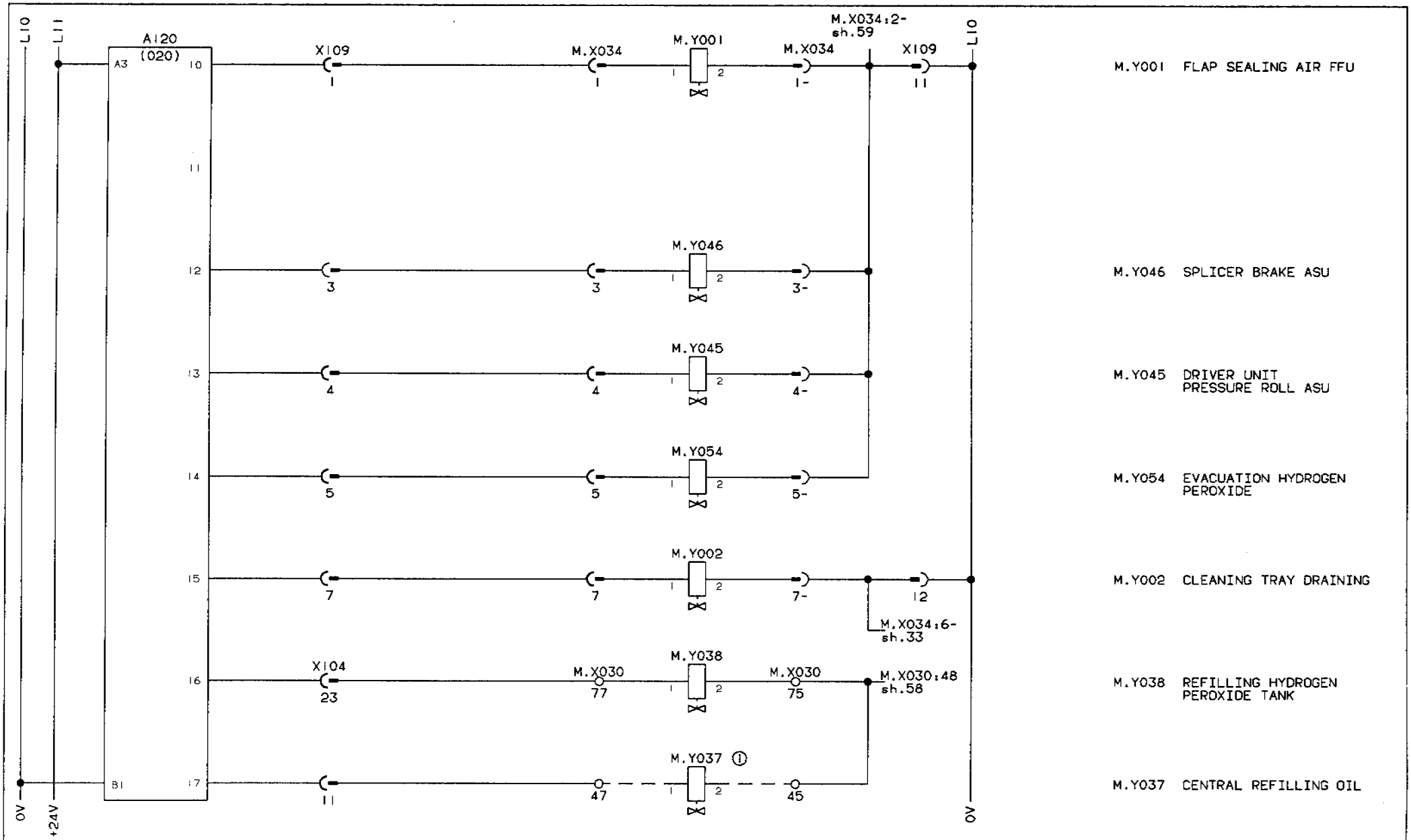

INTRODUCED WITH AM NO.	19666	DATE 930630	SIGN. BWM/JÅB	① EXTRA EQUIPMENT	DESCRIPTION: PLC-OUT 020, UPPER VALVE PANEL
ISSUE	A				
AM NO.	20127				
DATE	940117				MACHINE: TBA/8-100V
SIGN.	PSL			DRAWING REMARKS	44173-67:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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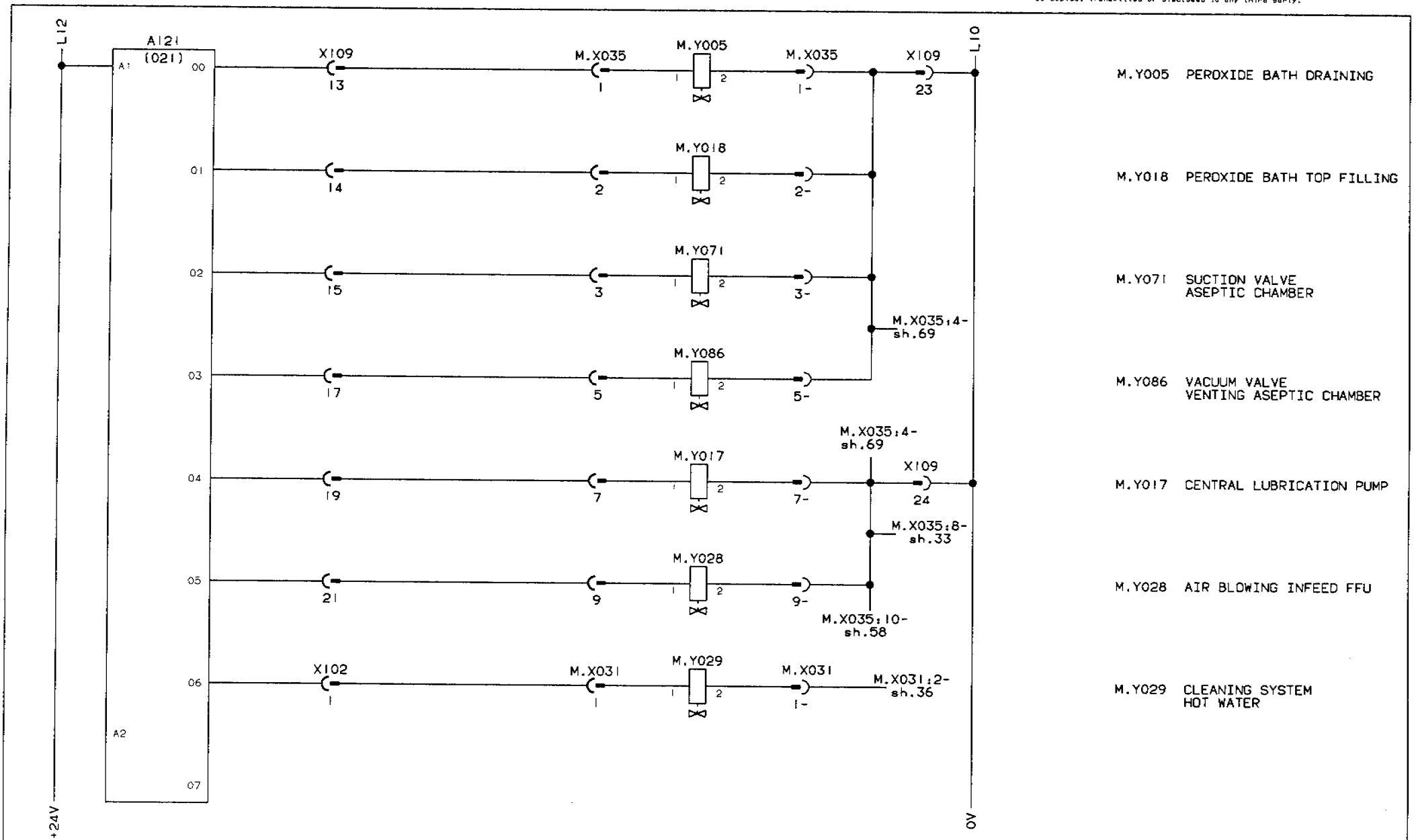

INTRODUCED WITH AM NO.	22843	DATE: 951017	SIGN. PGI	DESCRIPTION:	PLC-OUT 021, UPPER VALVE PANEL
ISSUE				MACHINE:	TBA/8-100V
AM NO.					44173-68:18
DATE					
SIGN.			DRAWING REMARKS		

ALTERATIONS ONLY IN CADAM

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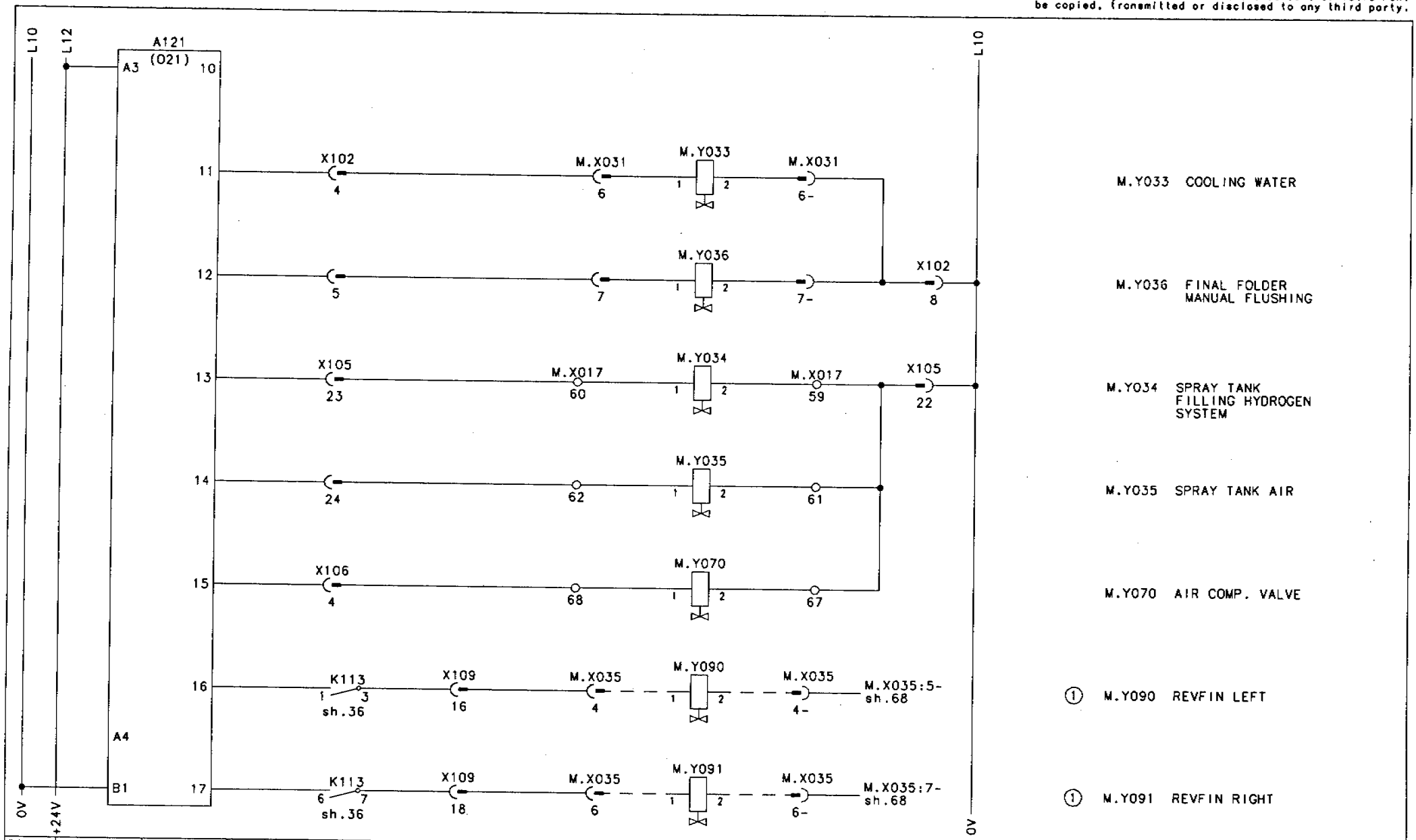

Note	A				1 EXTRA EQUIPMENT
ECN No.	70775				
Sign./Date	FRM/970404				
Appr./Date	FRM/970404				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer: FRM	Date 970404	Approved FRM	Date 970404	Doc. class –
Machine TBA/8-1000	Denomination PLC-OUT 021, LOWER VALVE PANEL			
Drawing No 44173-69:32				Page –

Tetra Pak
MODENA ITALY

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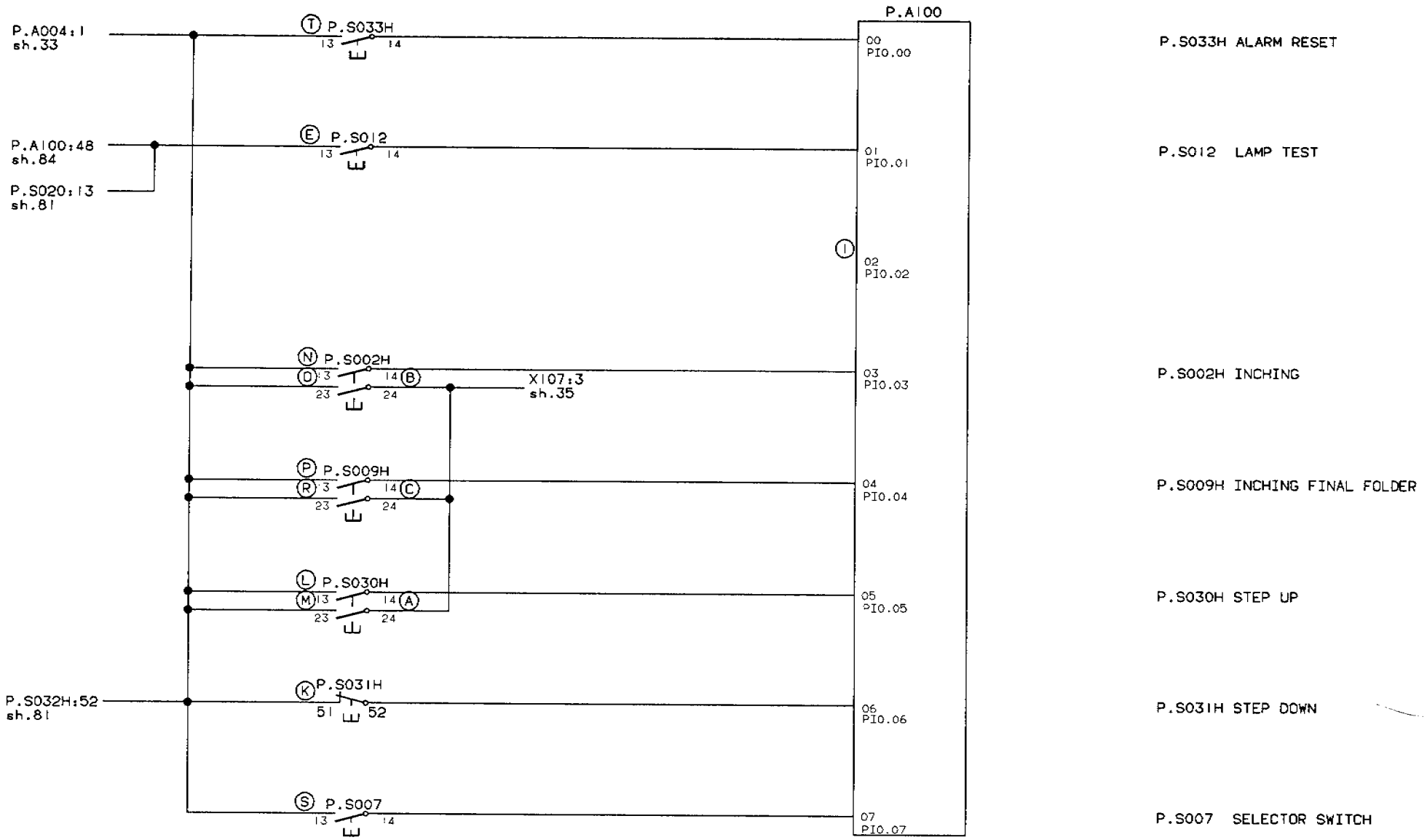

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÅB	(I) FOR INTERNAL USE.	DESCRIPTION: PANEL INTERFACE, MACHINE POSITIONS
ISSUE	A				
AM NO	20127				
DATE	940204				MACHINE: TBA/8-100V
SIGN	PSL/APO			DRAWING REMARKS	44173-80:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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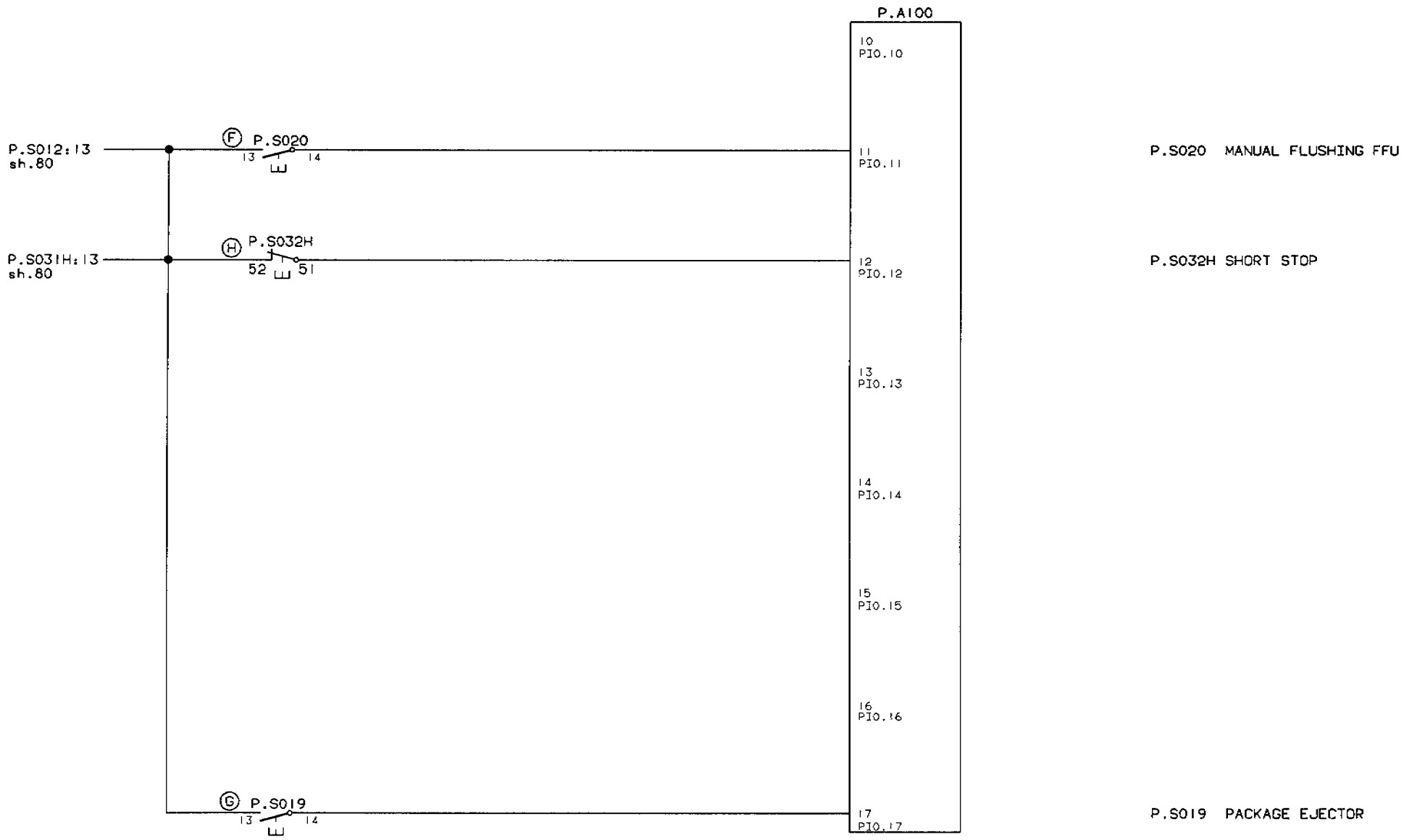

INTRODUCED WITH AM NO	19666		DATE: 930630		SIGN. BWM/JÅB			
ISSUE	A							
AM NO	20127							
DATE	940204							
SIGN.	PSL/APO							DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, MACHINE POSITIONS

MACHINE: TBA/8-100V

44173-81:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.

P.A100

20
PI1.00

21
PI1.01

22
PI1.02

23
PI1.03

24
PI1.04

25
PI1.05

26
PI1.06

27
PI1.07

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN. BWM/JAB			
ISSUE									
AM NO									
DATE									
SIGN									DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE

MACHINE: TBA/8-100V

44173-82:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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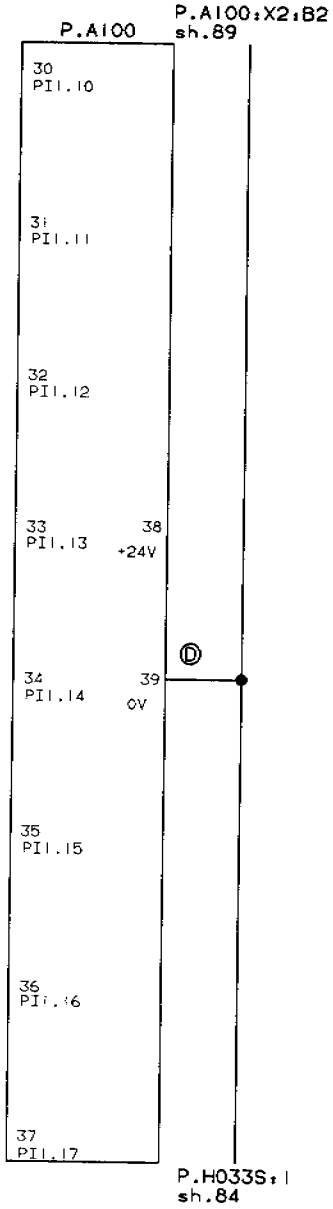

INTRODUCED WITH AM NO.	19666		DATE 930630		SIGN. BWM/JAB			
ISSUE	A							
AM NO	20127							
DATE	940204							
SIGN.	PSL/APO							

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, MACHINE POSITIONS

MACHINE: TBA/8-100V

44173-83:01

Tetra Pak
MODENA ITALY

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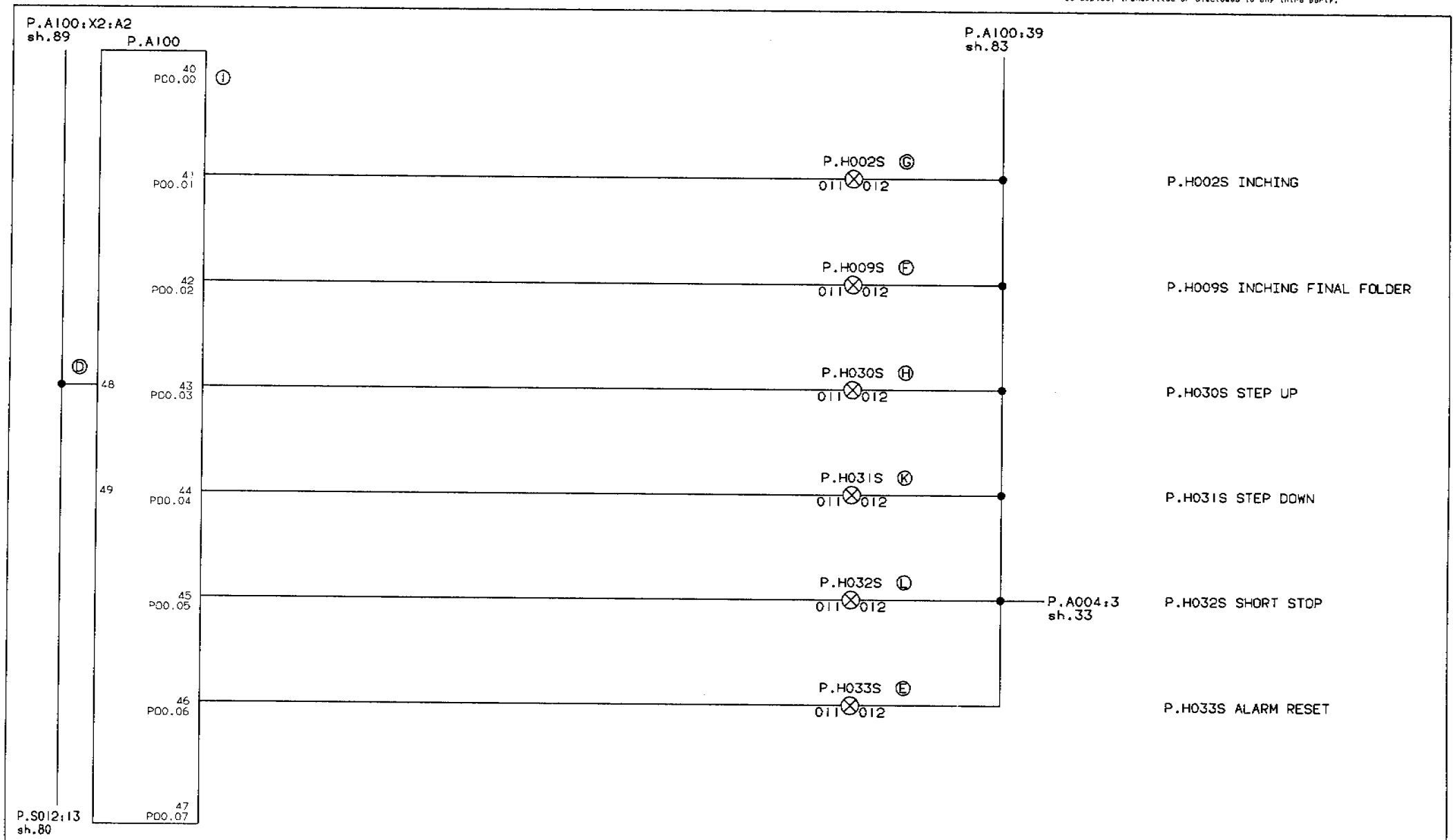

INTRODUCED WITH AM NO.	19666		DATE 930630		SIGN BWM/JÅB			Ⓘ FOR INTERNAL USE
ISSUE	A							
AM NO	20127							
DATE	940204							
SIGN	PSL/APO							DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: PANEL INTERFACE

MACHINE: TBA/8-100V

44173-84:01

Tetra Pak
LUND SWEDEN

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P.A100

	50 P00.10
	51 P00.11
	52 P00.12
58	53 P00.13
59	54 P00.14
	55 P00.15
	56 P00.16
	57 P00.17

INTRODUCED WITH AM NO	19666			DATE: 930630		SIGN BWM/JÅB		
ISSUE								
AM NO								
DATE								
SIGN.								

DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, OUTPUTS

MACHINE: TBA/8-100V

44173-85:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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P.A100

60
P01.00

61
P01.01

62
P01.02

63
P01.03

64
P01.04

65
P01.05

66
P01.06

67
P01.07

INTRODUCED WITH AM NO.	19666		DATE: 930630		SIGN. BWM/JAB				
ISSUE									
AM NO									
DATE									
SIGN									

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, OUTPUTS

MACHINE: TBA/8-100V

44173-86:01

Tetra Pak
LUND SWEDEN

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P.A100

70
P01.10

71
P01.11

72
P01.12

78
73
P01.13

79

INTRODUCED WITH AM NO.	19666		DATE: 930630		SIGN. BWM/JAB				
ISSUE									
AM NO.									
DATE									
SIGN									

DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: PANEL INTERFACE, OUTPUTS

MACHINE: TBA/8-100V

44173-87:01

Tetra Pak
LUND SWEDEN

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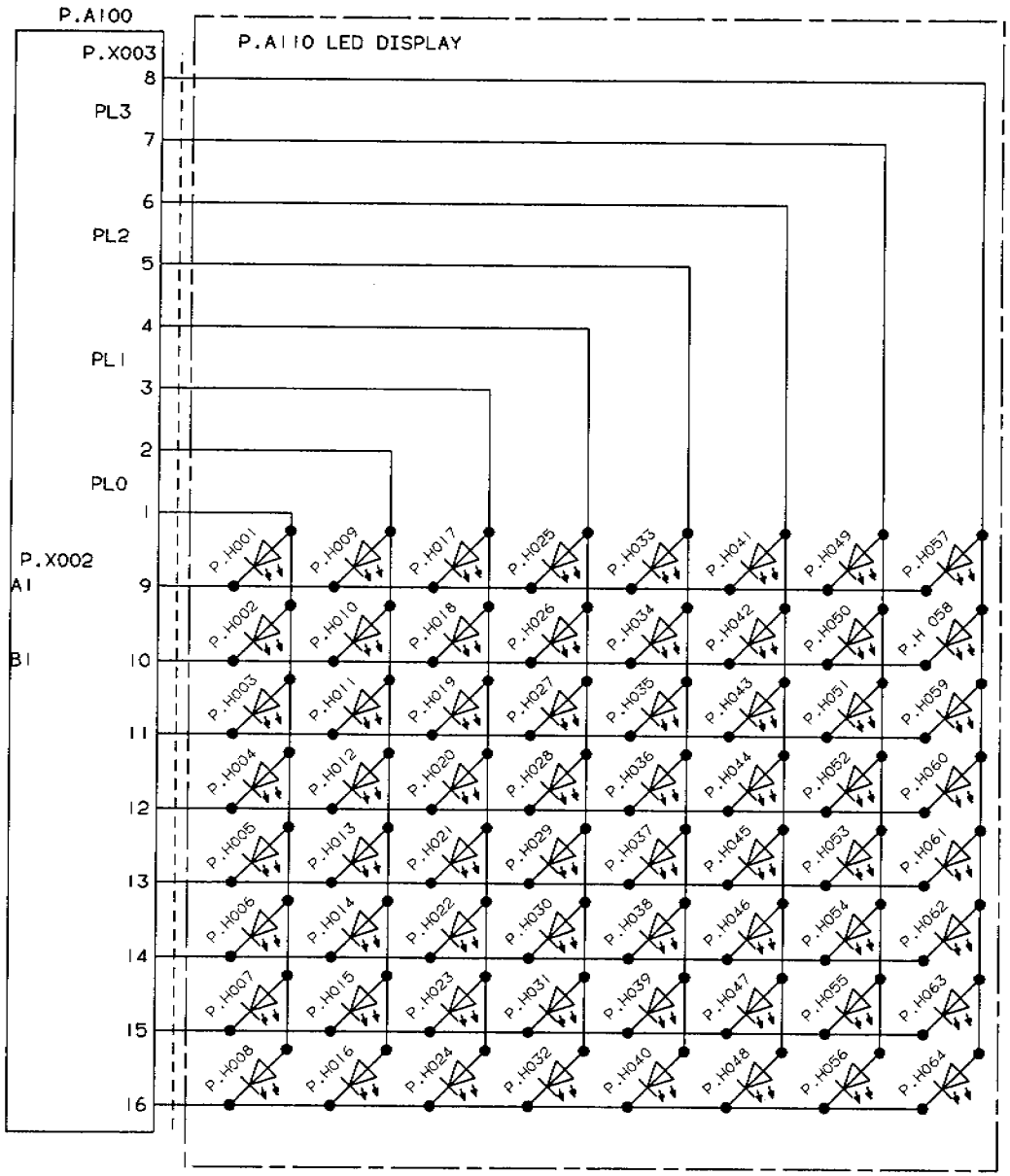

		ALARM			ALARM
PL0.00	P.H001	LOW PRESSURE WATER	PL2.00	P.H033	LOW LEVEL PEROXIDE BATH
PL0.01	P.H002	LOW PRESSURE MAIN AIR	PL2.01	P.H034	LOW TEMP.PEROXIDE BATH,WATER
PL0.02	P.H003	SAFETY MONITORS ACTIVATED	PL2.02	P.H035	SQUEEZE ROLLER WRONG POS.
PL0.03	P.H004	EMERGENCY STOPS ACTIVATED	PL2.03	P.H036	AIRKNIVES IN WRONG POSITION
PL0.04	P.H005	HL GAS SUPPLY LOW	PL2.04	P.H037	AIRKNIVES TEMPERATURE
PL0.05	P.H006	SUPERV. DOOR MONITOR TOWER	PL2.05	P.H038	SPRAYTIME OUT OF LIMITS
PL0.06	P.H007	TCO HIGH SPEED	PL2.06	P.H039	CLEANING THROUGH PROD.VALVE
PL0.07	P.H008	TEMPERATURE IH TRASVER. SEAL.	PL2.07	P.H040	STEAM TEMPERATURE
PL0.10	P.H009	HL WRONG CLEANING SEQUENCE	PL2.10	P.H041	NO PRODUCT FROM PROCESS
PL0.11	P.H010	OVERL. PROT. MOTORS TRIPPED	PL2.11	P.H042	PRODUCT PIPE WRONG POS.
PL0.12	P.H011	SERVICE SWITCH ACTIVATED	PL2.12	P.H043	CLEANING PIPE 2 WRONG POS.
PL0.13	P.H012	OIL PRESSURE LUBRICATION	PL2.13	P.H044	HVA PLUG IN POSITION
PL0.14	P.H013	LOW LEVEL LUBRICATION OIL	PL2.14	P.H045	AP-VALVE B WRONG POS.
PL0.15	P.H014	TEMP. OIL HYDRAULIC UNIT	PL2.15	P.H046	WRONG LEVEL SPRAY TANK
PL0.16	P.H015	LOW LEV. TANK HYDRUALIC UNIT	PL2.16	P.H047	CLEANING PIPE 1 WRONG POS.
PL0.17	P.H016	OVERLOAD IN JAW SYSTEM	PL2.17	P.H048	LOW TEMP LS-ELEMENT
PL1.00	P.H017	LOW VOLTAGE PLC BATTERY	PL3.00	P.H049	PRESTERIL. VALVE WRONG POS.
PL1.01	P.H018	HVA PUMP BARRIER TEMPERATURE	PL3.01	P.H050	PRESTERILIZATION TEMP.
PL1.02	P.H019	HVA DRIVER FAULT	PL3.02	P.H051	DOOR MONITORS ASU ACTIVATED
PL1.03	P.H020	HVA KIT EXCLUDED	PL3.03	P.H052	STERILE AIR TEMPERATURE
PL1.04	P.H021	COVER NOT IN PLACE ASU	PL3.04	P.H053	STERILE AIR PRESSURE
PL1.05	P.H022	PAPER SUPPLY IN ASU	PL3.05	P.H054	HIGH LEVEL WATER SEPARATOR
PL1.06	P.H023	NO PAPER FOR SPLICER ASU	PL3.06	P.H055	CLEANING CUP IN WRONG POS.
PL1.07	P.H024	MAGAZINE EMPTY ASU	PL3.07	P.H056	PRINTED DESIGN WRONG POS.
PL1.10	P.H025	ROTATION MONITOR ASU	PL3.10	P.H057	FAULT IH-UNITS TRANS. SEAL.
PL1.11	P.H026	STRIP SUPPLY STRIPAPPLICATOR	PL3.11	P.H058	MALFUNCTION INFEED FFU
PL1.12	P.H027	BROKEN STRIP STRIPAPPLICATOR	PL3.12	P.H059	FFU OVERLOAD/ ROT. MON.
PL1.13	P.H028	LOW TEMP. SA ELEMENT	PL3.13	P.H060	OIL PRESSURE FFU
PL1.14	P.H029	FAULT IH-UNIT ZONE HEATER	PL3.14	P.H061	MALFUNCTION FFU OUTFEED
PL1.15	P.H030	LOW PRESSURE WATER BATH	PL3.15	P.H062	LEVEL FAULT CLEAN. TRAY
PL1.16	P.H031	LOW TEMP.PEROXIDE BATH,PEROX.	PL3.16	P.H063	LOW TEMP. ASU ELEMENT
PL1.17	P.H032	BOTTOM COVER PEROXIDE BATH	PL3.17	P.H064	LOW LEVEL PEROXIDE TANK

INTRODUCED WITH AM NO.	19666	DATE 930630	SIGN. BWM/JAB
ISSUE	A		
AM NO.	20127		
DATE	940303		
SIGN.	PSL/APO		

DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, DIODES

MACHINE: TBA/8-100V

44173-88:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
MODENA ITALY

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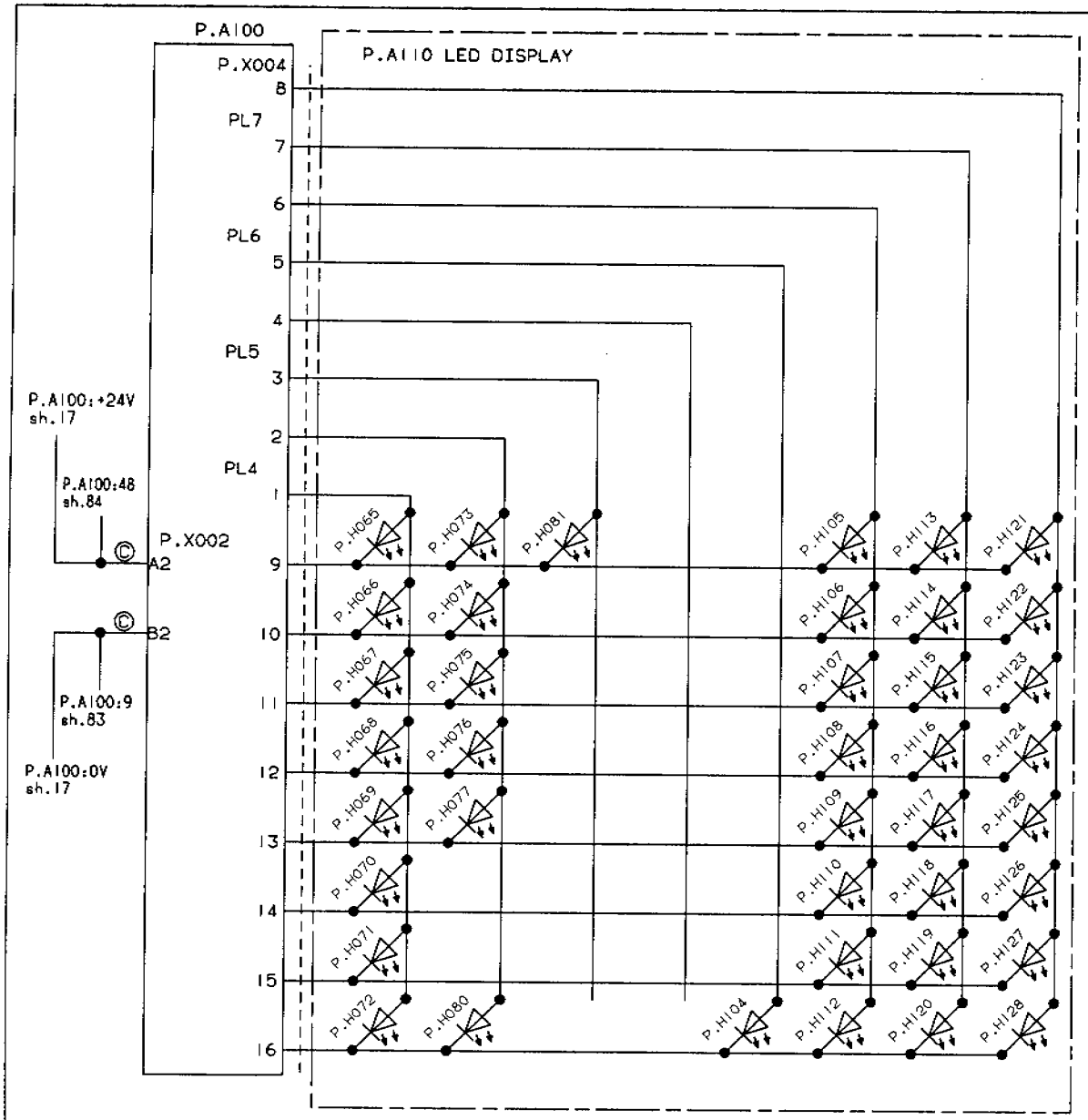

	ALARM			INDICATION	
PL4.00	P.H065	PEROX. TANK SENS. FAULT	PL6.00	P.H097	
PL4.01	P.H066	FFU SYNCH. CONVEYOR	PL6.01	P.H098	
PL4.02	P.H067	FFU QUEUE GARD	PL6.02	P.H099	
PL4.03	P.H068	SA SHORT STOP ELEMENT	PL6.03	P.H100	
PL4.04	P.H069	LS SHORT STOP ELEMENT	PL6.04	P.H101	
PL4.05	P.H070	DESIGN PHOTOCELL BROKEN	PL6.05	P.H102	
PL4.06	P.H071	PIPE JET DIVERTER POS.	PL6.06	P.H103	
PL4.07	P.H072	PIPE B-VALVE POSITION	PL6.07	P.H104	TIME LEFT
PL4.10	P.H073	HL DOSING VAL.WRONG POS.	PL6.10	P.H105	TIME LEFT
PL4.11	P.H074	HL CFV MEMBRANE LEAKAGE	PL6.11	P.H106	TIME LEFT
PL4.12	P.H075	HL FLOW ERROR	PL6.12	P.H107	TIME LEFT
PL4.13	P.H076	HL HL-VALVE WRONG POS.	PL6.13	P.H108	TIME LEFT
PL4.14	P.H077	HL/HVA OVERFILLING	PL6.14	P.H109	PREHEATING
PL4.15	P.H078	UPPER DOOR GUARD ASU	PL6.15	P.H110	PREHEATING FINISHED
PL4.16	P.H079		PL6.16	P.H111	TUBE SEALING
PL4.17	P.H080	CLEANING STEAM BARRIER	PL6.17	P.H112	TUBE SEALING FINISHED

PL5.00	P.H081	SURGE FILTER ACTIVATED	PL7.00	P.H113	SPRAYING
PL5.01	P.H082	PREPARATION	PL7.01	P.H114	DRYING
PL5.02	P.H083		PL7.02	P.H115	SIGNAL TO STERILIZER
PL5.03	P.H084		PL7.03	P.H116	SIGNAL FROM STERILIZER
PL5.04	P.H085		PL7.04	P.H117	MOTOR START
PL5.05	P.H086		PL7.05	P.H118	DRIVE MOTOR ON
PL5.06	P.H087		PL7.06	P.H119	FILLING ON
PL5.07	P.H088		PL7.07	P.H120	PRODUCTION
PL5.10	P.H089		PL7.10	P.H121	SHORT STOP
PL5.11	P.H090		PL7.11	P.H122	PRODUCTION FINISHED
PL5.12	P.H091		PL7.12	P.H123	VENTING ASEPTIC CHAMBER
PL5.13	P.H092		PL7.13	P.H124	DOORS ASEPTIC CHAMBER
PL5.14	P.H093		PL7.14	P.H125	READY FOR EXT. CLEANING
PL5.15	P.H094		PL7.15	P.H126	READY FOR CLEAN. OF FILL SYSTEM
PL5.16	P.H095		PL7.16	P.H127	EXTERNAL CLEANING
PL5.17	P.H096		PL7.17	P.H128	CLEAN OF FILL SYSTEM

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÅB
ISSUE	A		
AM NO	20127		
DATE	940207		
SIGN.	PSL/APO		

DRAWING REMARKS

DESCRIPTION: PANEL INTERFACE, DIODES

MACHINE: TBA/8-100V

44173-89:01

ALTERATIONS ONLY IN CADAM

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LADDER SYMBOLS																							
LADDER SYMBOL LIGHTS	F L	L	F L	L	F L	L	F L	L	F L	L	L	L		L	L	L	F L	F L	F L	F L	F L
OPERATOR ACTIONS	↑		↑		↑		↑		↱			◎	↱	↑			OPEN DOOR ASEPTIC CHAMBER	↑	↑	↑	↑
MACHINE MODE		PRE-HEATING	PRE-HEATING FINISHED	TUBE SEALING	TUBE SEALING FINISHED	FILLING	SPRAYING	DRYING	SIGNAL TO STERIL	SIGNAL FROM STERIL	START SEQUENS	DRIVE MOTOR	FILLING	PROD-UCTION	SHORT STOP	PROD-UCTION	END OF PRODUCTION	VENTING ASEPTIC CHAMBER	DOORS ASEPTIC CHAMBER	PREPARE FOR EXTERNAL CLEANING	PREPARE FOR VALVE CLEANING	EXTERNAL CLEANING	VALVE CLEANING A B C
						24s	130S	25min			10s						90s	5 OR 15min					
MAIN MOTOR LOW SPEED ON / OFF	K001 O14.00																						
MAIN MOTOR HIGH SPEED ON / OFF	K002 O14.01																						
MECHANICAL BRAKE ON / OFF	K004 O14.02																						
FFU-FQ, POWER ON ON / OFF	K005 O15.02																						
FFU-MOTOR, POWER ON ON / OFF	K006 O14.03																						
FFU-MOTOR, LOW SPEED ON / OFF	G001 MO5.15																						
FFU-MOTOR, HIGH SPEED ON / OFF	G001 O15.14																						
EXTERNAL CONVEYOR ON / OFF	K014 O14.06																						
DROP CHUTE FFU ON / OFF	Y027 O14.07																						
AIR BLOWING INFEED FFU OFF / ON	Y028 O21.05																						
ASU-MOTOR, LOW SPEED OFF / ON	A003 O16.06																						
ASU-MOTOR, HIGH SPEED OFF / ON	A003 O16.07																						
COUNTER ROLLER, ASU ON / OFF	Y045 O20.13																						
SPLICER BRAKE, ASU ON / OFF	Y046 O20.12																						
SPLICER PRESS. JAW ASU ON / OFF	Y047 O20.00																						
POSITION LADDER		0	1		2		3		4			5	6			7	0 OR 7	7				

hole	A		
ECN No.	71424		
Sign./Date	RAI/980309		
Appr./Date	PGI/980309		

F = FLASHING LIGHT
L = CONTINOUS LIGHT
△ = NORMAL PRESS
↱ = LONG PRESS
▭ = ELECTRICALLY ACTIVATED

Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer	Date	Approved	Date	Doc. class
RAI	980309	PGI	980309	-

Machine: TBA/8-1000

Denomination: MACHINE OPERATIONS DIAGRAM, RUNNING

Drawing No: 47745-04:43

Page: 1/5

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LADDER SYMBOLS																						
LADDER SYMBOL LIGHTS	F L	L	F L	L	F L	L	F L	L	F L	L	L	L	L	L	L	F L	F L	F L	F L	F L
OPERATOR ACTIONS	↑		↑		↑		↑		↱			◎	↱ ↑			OPEN DOOR ASEPTIC CHAMBER	↑	↑	↑	↑
MACHINE MODE		PRE-HEATING	PRE-HEATING FINISHED	TUBE SEALING	TUBE SEALING FINISHED	FILLING	SPRAYING	DRYING	SIGNAL TO STERIL	SIGNAL FROM STERIL	START SEQUENS	DRIVE MOTOR	FILLING	PRODUCTION	SHORT STOP	PRODUCTION	END OF PRODUCTION	VENTING ASEPTIC CHAMBER	DOORS ASEPTIC CHAMBER	PREPARE FOR EXTERNAL CLEANING	PREPARE FOR VALVE CLEANING	EXTERNAL CLEANING	VALVE CLEANING A B C
						24s	100S	25min			10s						90s	5 OR 15min					
BENDING ROLLER, POWER ON / OFF	K007-K008 O14.04																						
BENDING ROLLER ON / OFF	A002 O15.15																						
DESIGN CORRECTION VALVE FEEDING ON / OFF	A004 O17.11																						
DESIGN CORRECTION ON / OFF	Y012 A4																						
DESIGN CORRECTION ON / OFF	Y013 A4																						
DESIGN CORRECTION ON / OFF	Y014 A4																						
DESIGN CORRECTION ON / OFF	Y078 A4																						
FAN AIR COOLER CABINET ON / OFF	K125 O17.13																						
CLEANING TRAY, DRAINING ON / OFF	Y002 O20.15																						
EXTERNAL CLEANING, WATER ON / OFF	Y029 O21.06																						
CLEANING TRAY LEVEL OFF / ON	K112 O15.07																						
DETERGENT PUMP, SOLUTION OFF / ON	K015 O15.06																						
CIRC. PUMP, CLEANING OFF / ON	K012 O14.05																						
CENTRAL LUBRICATION PUMP ON / OFF	Y017 O21.04	LONG LUBR.	LONG LUBRICATION 5 x 10s/5 MIN								NORMAL LUBRICATION 10s/15 MIN											LONG LUBR.	
PACKAGE COUNTERS ON / OFF	P005, P006 O16.11																						
POSITION LADDER		0	1		2		3		4			5	6			7	0 OR 7		7				

Note	A			
ECN No.	71424			
Sign./Date	RAI/980309			
Appr./Date	PGI/980309			

F = FLASHING LIGHT
L = CONTINOUS LIGHT
= ELECTRICALLY ACTIVATED
= NORMAL PRESS
= LONG PRESS

Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer	Date	Approved	Date	Doc. class
RAI	980309	PGI	980309	-

Machine: TBA/8-1000

Denomination: MACHINE OPERATIONS DIAGRAM

Drawing No: 47745-04:43

Page: 2/5

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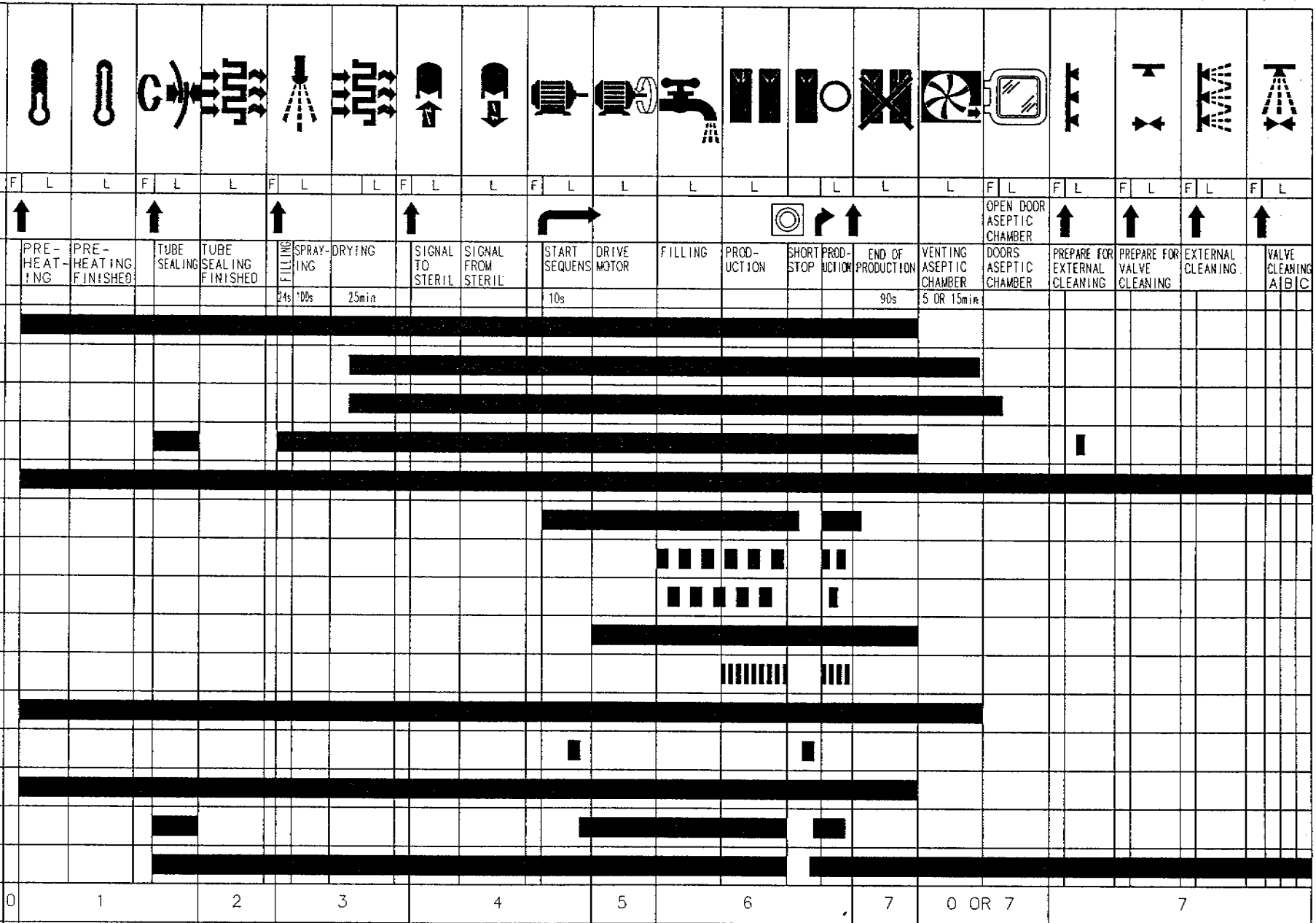

Note	A				F = FLASHING LIGHT	= NORMAL PRESS	Tetra Pak	Designer RAI	Date 980309	Approved PG1 Date 980309	Doc. class –
ECN No.	71424				L = CONTINOUS LIGHT	= LONG PRESS		Machine TBA/8-1000	Denomination MACHINE OPERATIONS DIAGRAM, SEALING		
Sign./Date	RAI/980309				= ELECTRICALLY ACTIVATED		Company Tetra Brik R.& D. S.p.A.	Drawing No 47745-04:43			Page 3/5
Appr./Date	PG1/980309				Drawing remarks						

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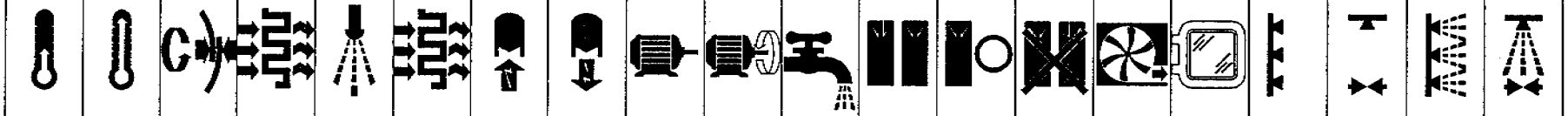
LADDER SYMBOLS



LADDER SYMBOL LIGHTS	F	L	L	F	L	L	F	L	L	F	L	L	F	L	L	L	L	L	L	L	F	L	F	L	F	L	F	L	F	L
OPERATOR ACTIONS	↑			↑			↑			↑			↱					◎	↱ ↑		OPEN DOOR ASEPTIC CHAMBER		↑		↑		↑		↑
MACHINE MODE		PRE-HEAT-ING	PRE-HEATING FINISHED		TUBE SEALING	TUBE SEALING FINISHED		FILLING	SPRAY-ING		DRYING		SIGNAL TO STERIL	SIGNAL FROM STERIL		START SEQUENS	DRIVE MOTOR	FILLING	PROD-UCTION	SHORT STOP	PROD-UCTION	END OF PRODUCTION	VENTING ASEPTIC CHAMBER	DOORS ASEPTIC CHAMBER	PREPARE FOR EXTERNAL CLEANING		PREPARE FOR VALVE CLEANING		EXTERNAL CLEANING		VALVE CLEANING A B C
								24s	108S		25min											90s	5 OR 15min							
STERILE AIR COMPRESSOR ON / OFF	K010 / 014.11																													
COMPRESSOR WATER ON / OFF	Y032 / K10																													
PEROXIDE BATH ELEMENT ON / OFF	K019 / 015.11																													
PEROXIDE PUMP ON / OFF	K011 / 014.10																													
SPRAY TANK FILLING ON / OFF	Y034 / 021.13																													
SPRAY TANK AIR ON / OFF	Y035 / 021.14																													
PREHEAT.,AIR INL.HEAT EXCH. ON / OFF	Y044 / 020.07																													
PEROXIDE BATH DRAINING ON / OFF	Y005 / 021.00																													
PER.BATH FILL.,DRAINING ON / OFF	Y006 / 020.02																													
PER.BATH, TOP FILLING ON / OFF	Y018 / 021.01																													
OFF / ON																														
OFF / ON																														
OFF / ON																														
ON / OFF																														
ON / OFF																														
POSITION LADDER		0	1			2		3				4				5		6				7	0 OR 7	7						

Note	A				F = FLASHING LIGHT	△ = NORMAL PRESS	Tetra Pak	Designer RAI	Date 980309	Approved PGI	Date 980309	Dec. class –
ECN No.	71424				L = CONTINOUS LIGHT	⇨ = LONG PRESS		Machine TBA/8-1000	Denomination MACHINE OPERATIONS DIAGRAM			
Sign./Date	RAI/980309				▭ = ELECTRICALLY ACTIVATED							
Appr./Date	PGI/980309				Drawing remarks		Company Tetra Brik R.& D. S.p.A.	Drawing No 47745-04:43				Page 4/5

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LADDER SYMBOLS																							
LADDER SYMBOL LIGHTS	F L	L	F L	L	F L	L	F L	L	F L	L	F L	L	L	L	L	L	L	F L	F L	F L	F L
OPERATOR ACTIONS	↑		↑		↑		↑		↱				↑	OPEN DOOR ASEPTIC CHAMBER	↑	↑	↑	↑
MACHINE MODE		PRE-HEATING	PRE-HEATING FINISHED	TUBE SEALING	TUBE SEALING FINISHED	FILLING	SPRAYING	DRYING	SIGNAL TO STERIL	SIGNAL FROM STERIL	START SEQUENS	DRIVE MOTOR	FILLING	PROD-UCTION	SHORT STOP	PROD-UCTION	END OF PRODUCTION	VENTING ASEPTIC CHAMBER	DOORS ASEPTIC CHAMBER	PREPARE FOR EXTERNAL CLEANING	PREPARE FOR VALVE CLEANING	EXTERNAL CLEANING	VALVE CLEANING A B C
						24s	100s	25min			10s						90s	5 OR 15min					
SUCT. VALVE DRYER/BATH ON OFF	Y023 020.06																						
SQUEE GEE ROLL./AIR KNIFES ON OFF	Y021 014.13																						
PRODUCT VALVE (A) ON OFF	Y009 020.01																						
STERILE AIR VALVE (B) ON OFF	Y008 020.04																						
STEAM BARRIER VALVE (C) ON OFF	Y007 020.03																						
SUCT.VALVE ASEP.CHAMBER ON OFF	Y071 021.02																						
COMPENSATION VALVE ON OFF	Y070 021.15																						
PROCESS SIGN.REQ.F.PROD. ON OFF	K108 017.04																						
PROCESS SIGNAL PROD. ON OFF	K109 017.05																						
PROCESS SIGNAL FILL. ON ON OFF	K110 017.06																						
READY FOR CIP OFF ON	K111 017.07																						
EVACUATION HYDR.PEROX. OFF ON	Y054 020.14																						
VACUUM VALVE VENT.AS.CHAM. OFF ON	Y086 021.03																						
ON OFF																							
ON OFF																							
POSITION LADDER		0	1		2		3		4			5	6			7	0 OR 7		7			

Note	A			
ECN No.	71424			
Sign./Date	RAI/980309			
Appr./Date	PGI/980309			

F = FLASHING LIGHT
L = CONTINOUS LIGHT
= ELECTRICALLY ACTIVATED
= NORMAL PRESS
= LONG PRESS
Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class –
Machine TBA/8-1000	Denomination MACHINE OPERATIONS DIAGRAM			
Drawing No 47745-04:43				Page 5/5

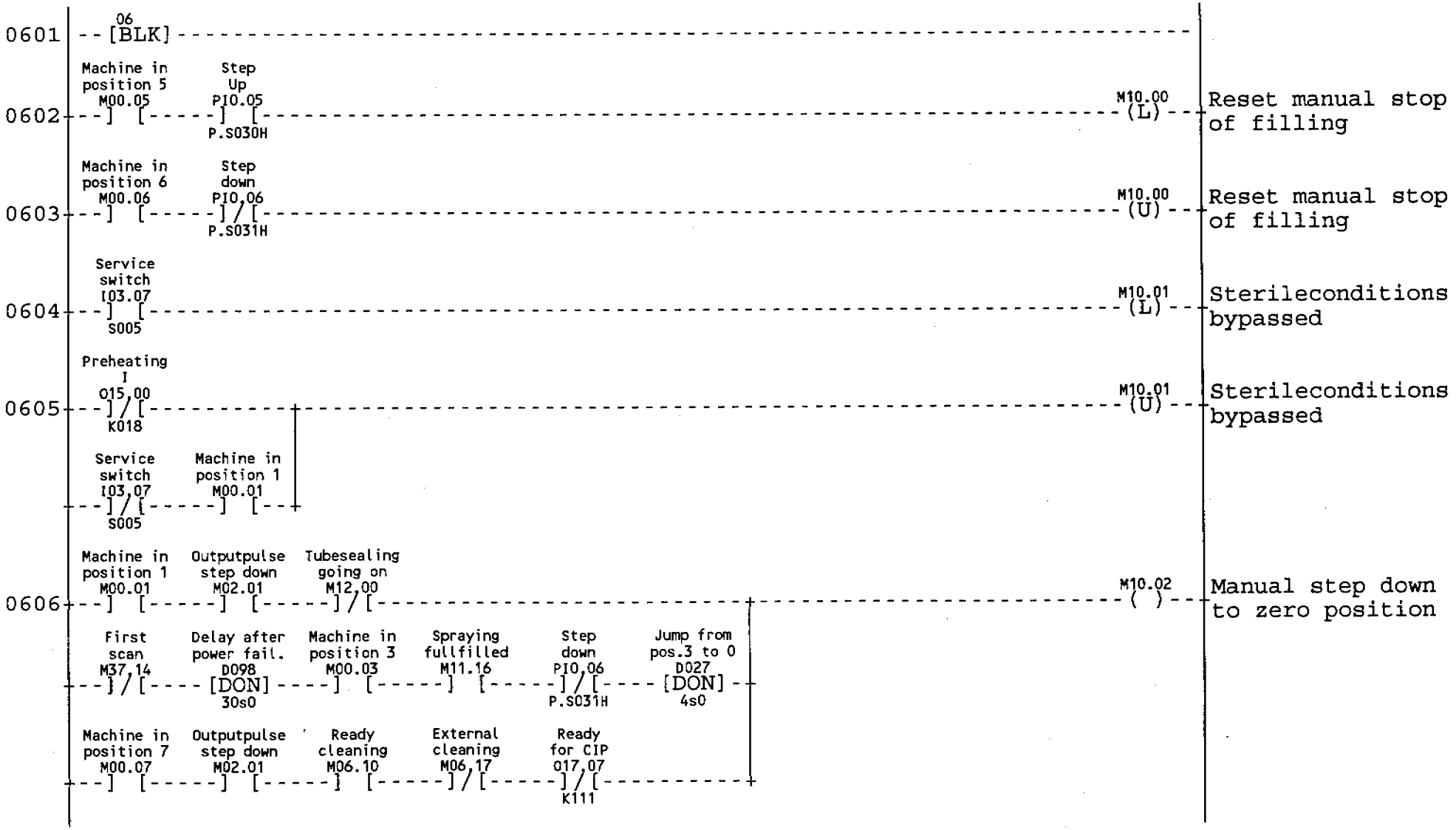
PULSE AND FLASHGENERATING

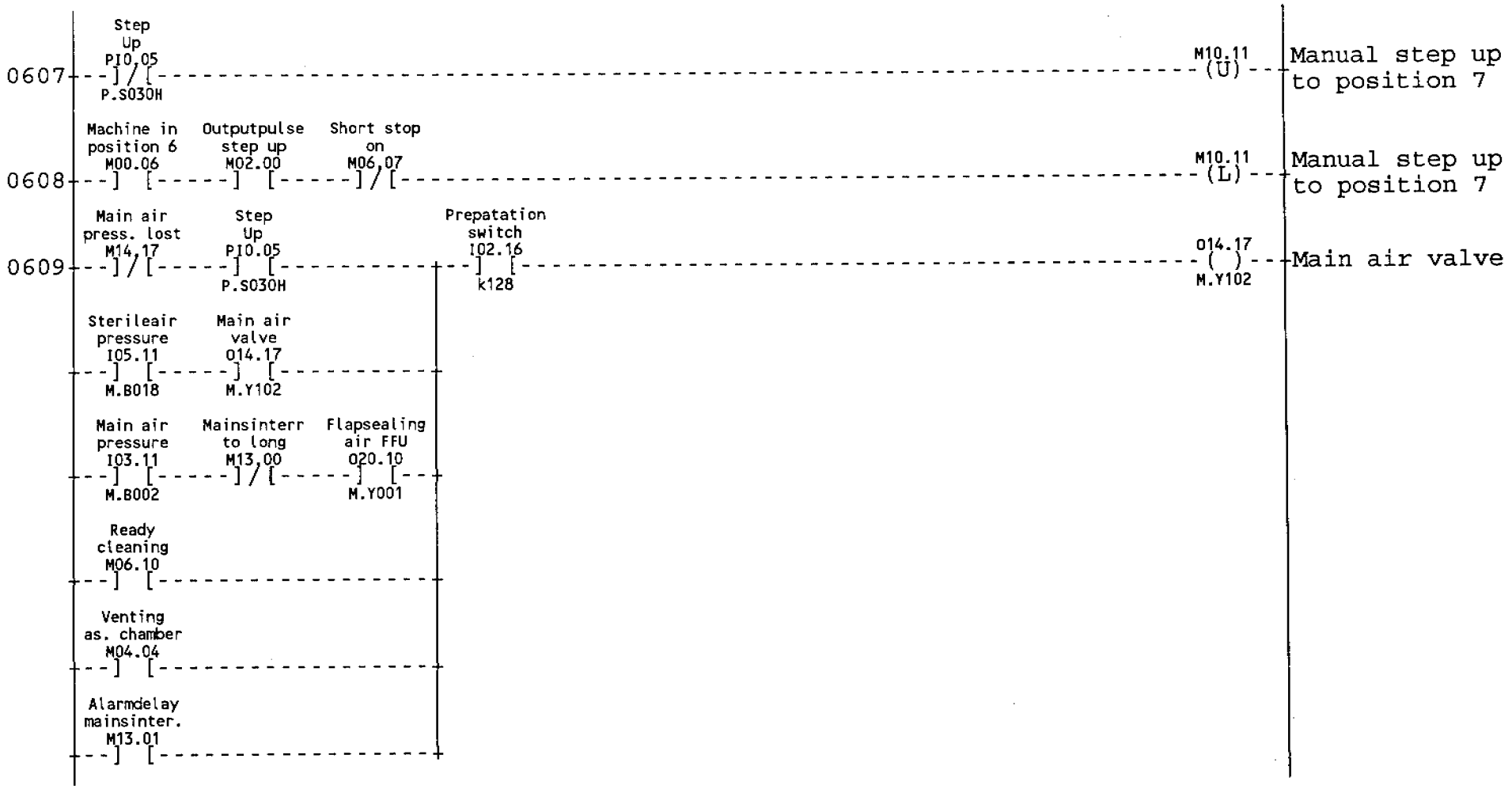
```
0501 --[BLK]05 ----------------------------------------------------------------------------------------
0502 First scan M37.14 ]-[---- K0000H [GET] ---------- Panel int. config. R3500 (PUT) --- Panel int. config. R3501 (PUT) --- Panel int. config. R3502 (PUT) --- Panel int. config. R3503 (PUT) --- Panel int. config. R3504 (PUT) --- R3505 (PUT) --+ Storage word for panel interface configuration
0503 First scan M37.14 ]-[---- KFFFFH [GET] ---------- Panel int. config. R3506 (PUT) --- R3507 (PUT) --+ Storage word for panel interface configuration
0504 PIDAT M140.06 ]-[----- Initiation com.area PI M05.00 [P-] ---------- M100.00 (L) --+ Send communication area to Panel Interface
0505 Step Up PI0.05 ]-[----- Pulse step up M03.00 [P+] ---- Short stop I02.07 ]-[----- Step down PI0.06 ]-[----- Short stop PI0.12 ]-[ ---------- M02.00 ( ) --+ Output for pulse step up
     P.S030H                                S003-M.S061                P.S031H                P.S032H
0506 Step down PI0.06 ]/[----- Pulse step down M03.01 [P+] ---------- M02.01 ( ) --+ Output for pulse step down
     P.S031H
0507 Sector brake S00.03 ]-[----- Pulse start brake M03.02 [P+] ---------- M02.02 ( ) --+ Output for pulse brake
     55-65
     255-265
0508 Machine in position3-7 M00.12 ]-[----- Pulse des. photocell I04.04 ]-[----- Pulse print des. M03.03 [P+] ---------- M02.03 ( ) --+ Output for pulse printed design
                                A004
0509 Scan shiftreg. S00.05 ]-[----- Pulse shiftreg. M03.04 [P+] ---------- M02.04 ( ) --+ Output for pulse activation packagedumping
     115-124
     315-324
```

```
0510 Stop pos. FFU I04.11 ]/[ M.B041 ---- Pulse pos.FFU M03.05 [P+] ---------------------------------------- M02.05 ( ) Output for pulse FFU

0511 Outputpulse step up M02.00 ]/[ ---- Machine in position4-7 M00.13 ]/[ ---- Signal from sterilizer M10.03 ]/[ ---------- M02.06 ( ) Output for pulse startsequence

0512 Rotation monitor I07.06 ]/[ M.B009 ---- Pulse rot.monitor M03.07 [P+] ---------------------------------------- M02.07 ( ) Output for pulse rotation monitor

0513 Machine in position3-7 M00.12 ]/[ ---- Mechanical brake O14.02 K004 ]/[ ---- Outputpulse step up M02.00 ]/[ ---- Pulse tubesealing M03.10 [P+] ---------- M02.10 ( ) Output for pulse tubesealing
     Machine in position 6 M00.06 ]/[ ---- Outputpulse pack.dump. M02.04 ]/[ ---- Inching mainmotor P10.03 P.S002 ]/[

0514 Sector brake S00.03 55-65 255-265 ]/[ ---- Pulse short stop M03.11 [P-] ---- Machine in position3-7 M00.12 ]/[ ---- Aux.output startseq. M14.00 ]/[ ---------- M02.11 ( ) Output for pulse stop

0515 Machine in position 0 M00.00 ]/[ ---- Outputpulse step up M02.00 ]/[ ---- Step up conditions M01.01 ]/[ ---- External clean.ended M27.00 ]/[ ---- Selector switch P10.07 P.S007 ]/[ ---- Pulse long lubric M03.12 [P+] ---------- M02.12 ( ) Output for pulse start long lubrication
     Lubrication after clean C0003.5 640-644 ]/[ ----------
     Manual lubrication I03.10 M.S014 ]/[ ---- Long lubrication M11.07 ]/[ ---- Lubric.oil low level I04.02 M.B030 ]/[ ----------
```

0516	Creasewheel position I07.01 M.B062	Pulse pos.ASU M03.13 [P-]		M02.13 ( )	Output for pulse position ASU
0517	Strip splice I07.14 M.S034	Pulse PE-splice M03.14 [P+]		M02.14 ( )	Output for pulse PE-strip splice
0518	Paper splice I07.15 M.B035	Pulse web splice M03.15 [P+]		M02.15 ( )	Output for pulse web splice
0519	FFU overload I04.13 M.B020	Pulse overl.FFU M03.16 [P+]		M02.16 ( )	Output for pulse overload FFU
0520	Inching mainmotor PI0.03 P.S002	Pulse inching M03.17 [P+]	Machine in position 6 M00.06]/[	M02.17 ( )	Output for pulse inching main motor
0521	Flash 1 Hz M37.00	Pulse gen. 1/2 HZ M04.11 [P+]		M04.12 (C)	Flash 1/2 Hz
0522	Alarm reset PI0.00 P.S033H	Pulse alarm reset push. M05.10 [P+]	Alarm reset pulse D101 [DOF] 0s400	M05.11 ( )	Output for pulse alarm reset

POSITIONS MACHINELADDER




0607
Step Up PI0.05 P.S030H
M10.11 (U)
Manual step up to position 7
0608
Machine in position 6 M00.06
Outputpulse step up M02.00
Short stop on M06.07
M10.11 (L)
Manual step up to position 7
0609
Main air press. lost M14.17
Step Up PI0.05 P.S030H
Prepatation switch I02.16 k128
O14.17 M.Y102
Main air valve
Sterileair pressure I05.11 M.B018
Main air valve O14.17 M.Y102
Main air pressure I03.11 M.B002
Mainsinterr to long M13.00
Flapsealing air FFU O20.10 M.Y001
Ready cleaning M06.10
Venting as. chamber M04.04
Alarmdelay mainsinter. M13.01

0610
- Main air valve O14.17 M.Y102]
- Check air pressure D053 [DON] 5s0 ----
- Main air pressure I03.11 M.B002]/[
- Delay air pressure D060 [DON] 0s5 ---
- Reset EM-stop M14.04]
- M14.17 (L) — Main air pressure lost

Main air valve O14.17 M.Y102]/[— Check air pressure D054 [DON] 4s5 — Main air pressure I03.11 M.B002]

0611
- Alarm reset PI0.00 P.S033H]
- M14.17 (U) — Main air pressure lost

0612
- Reset to zeropos. M07.14]
- Manual step down to 0 M10.02]
- K00000 [GET]
- R0000 (PUT) — Storage word for position machine ladder

0613
- Sterileair pressure I05.11 M.B018]
- Machine in position 0 M00.00]
- Step up conditions M01.01]
- Step Up PI0.05 P.S030H]
- Machine in position 2 M00.02]
- Outputpulse step down M02.01]
- Service switch I03.07 S005]/[
- Machine in position 2 M00.02]
- Sterilecond bypassed M10.01]
- K00001 [GET]
- R0000 (PUT) — Storage word for position machine ladder

```
0614 Wrong pos.  Drying     Machine in
     AP-valve(B) fullfilled position 3
     M06.16      M11.17     M00.03
     ---]  [-----]/[---+---]  [----[GET]----------------------------------------(PUT)--+ Storage word for position
                       |                                                                | machine ladder
     Spray       Start  |
     fault       spraying|
     M10.15      C0005.4 |
     ---]  [-----]/[---+
                 24-120  |
                         |
     Wrong pos.          |
     airinletval         |
     M10.16              |
     ---]  [-----------+

0615 Machine in  Outputpulse Pack.eject
     position 1  pack.dump.  FFU activ.
     M00.01      M02.04      M10.13
     ---]  [-----]  [-----]  [----[GET]----------------------------------------(PUT)--+ Storage word for position
                                                                                       machine ladder
```

```
     Machine in   Outputpulse   Step up                  Memory to
     position 2   step up       conditions               0-position
       M00.02       M02.00        M01.01                   M07.13      K00003                                  R0000
0616--]  [-----]  [-----]  [-----------+--]/[----[GET]----------------------------(PUT)--+ Storage word for position
                                       |                                                  | machine ladder
     Machine in   Outputpulse          |
     position 4   step down            |
       M00.04       M02.01             |
--]  [-----]  [-------------------+    |
                                  |    |
     Machine in   Main motor      |    |
     position 5   high speed      |    |
       M00.05       O14.01        |    |
--]  [-----]/[-------------------+    |
                  K002                |
                                      |
     Demand III   Aux.output   End start   Drying
     short stop   startseq.    sequence    fullfilled
       M06.06       M14.00      T0000.1     M11.17
--]/[-----]  [-----]/[-----+--]  [--+
                            |
                            |
                            |
                            |
     Machine in   Jump to   |
     position4-7  pos. 3    |
       M00.13       M06.15  |
--]  [-----]/[-----------+  |
                         |  |
     Machine in   Step   |  |
     position 7   down   |  |
       M00.07       P10.06 |
--]  [-----]/[-----------+  |
                  P.S031H    |
                             |
     Machine in   Short stop   Jump to   Drying
     position4-7  on           pos. 3    fullfilled
       M00.13       M06.07      M06.15    M11.17      K00003                                  R0000
0617--]  [-----]  [-----]/[-----]  [----[GET]----------------------------------------(PUT)--+ Storage word for position
                                                                                             | machine ladder
```

```
0618 Machine in position 1 M00.01 ---] [-----] Service switch I03.07 S005 [-----] Outputpulse step up M02.00 [-----] Preheating ready M06.03 [---+- [GET] K00004 ---------- (PUT) R0000 -+ Storage word for position machine ladder
     Machine in position 3 M00.03 ---] [-----] Step up conditions M01.01 [-----] Outputpulse step up M02.00 [----------+
     Machine in position 5 M00.05 ---] [-----] Outputpulse step down M02.01 [----------+

0619 Design in wrong pos. C0001.0 10-11 ---] [-----] Machine in design M11.11 [---- [GET] K00004 ---------- (PUT) R0000 -+ Storage word for position machine ladder

0620 Machine in position 4 M00.04 ---] [-----]/[-----] Inching mainmotor P10.03 P.S002 [-----] Step Up P10.05 P.S030H [-----] End start sequence T0000.1 10s0 15s2 [---+- [GET] K00005 ---------- (PUT) R0000 -+ Storage word for position machine ladder
     Step down P10.06 P.S031H ---]/[---+---] Outputpulse pack.dump. M02.04 [---+---] Machine in position 6 M00.06 [----------+
     Memory to 0-position M07.13 ---] [---+---] Short stop on M06.07 [---+
```

0621
Fillentran. selector I03.00]/[S006.2
Fillentran. selector I03.01]/[S006.2
Filling sector 0 S00.07] [47-66 247-266
Machine in position 5 M00.05] [
Outputpulse print.des. M02.03] [
Step up conditions M01.01] [
K00006 [GET]
R0000 (PUT)
Storage word for position machine ladder

Fillentran. selector I03.00] [S006.2
Fillentran. selector I03.01]/[S006.2
Filling sector 1 S00.08] [67-106 267-306

Fillentran. selector I03.00]/[S006.2
Fillentran. selector I03.01] [S006.2
Filling sector 2 S00.10] [107-126 307-326

Fillentran. selector I03.00] [S006.2
Fillentran. selector I03.01] [S006.2
Filling sector 3 S00.11] [127-146 327-346

0622
Machine in position 0 M00.00] [
Step up conditions M01.01] [
Step Up PI0.05] [P.S030H
Selector switch PI0.07]/[P.S007
K00007 [GET]
R0000 (PUT)
Storage word for position machine ladder

Outputpulse pack.dump. M02.04] [
Man.step up to pos. 7 M10.11] [

0623
Pulse alarm reset M05.11] [
Redundancy on I02.17]/[K030
Flash 5 Hz M37.01] [
O17.14 ( ) K127
Auxiliary relay reset

Alarmdelay mainsinter. M13.01] [
Machine in position 0 M00.00]/[

0624 Redundancy on I02.17 K030] [Delay for redundancy D102 [DON] 3s5 ( ) M14.16 — Memory for delay on redundancy

0625 Machine in position 0 M00.00] [Water pressure I03.12 M.B003] [Sterileair pressure I05.11 M.B018]/[Venting as. chamber M04.04]/[Wrong pos. cleanpipes M06.01] [Memory to 0-position M07.13]/[Main air press. lost M14.17]/[( ) M01.00 — Step up conditions in machine ladder

Machine in position 1 M00.01] [Steam low temperature I06.01 A202] [Strip break I07.17 M.B033] [Preheating ready M06.03] [Wrong pos. airinletval M10.16]/[Delay on redundancy M14.16] [Alarmstatus in FFU M15.04] [ASU ready M16.01] [

Machine in position 2 M00.02] [Door guards tower I02.04 M.B070:1-4] [Presteril. air temp. I06.00 A201] [Steam low temperature I06.01 A202] [Sterileair temperature I06.03 A204] [Level in spray tank M06.02]/[Perox. pump stopped M07.02]/[

Machine in position 3 M00.03] [Demand II short stop M06.05] [Jump to pos. 3 M06.14] [Drying fullfilled M11.17] [

Machine in position 4 M00.04] [Product at machine I03.04 X1.377] [Demand III short stop M06.06] [Delay on redundancy M14.16] [

Machine in position 5 M00.05] [Reset man. filling off M10.00] [Delay filling on C0008.0 28-30] [

Machine in position 6 M00.06] [Demand III short stop M06.06] [Short stop on M06.07] [Delay on redundancy M14.16] [

0626

Machine in position 7 M00.07] [Door guards tower I02.04] [Mem door as.chamber M04.05] [M.B070:1-4 ---------- M01.01 ( ) Step up conditions in machine ladder

Machine in position 7 M00.07] [Condition int. clean M06.12] [Ready for CIP O17.07] / [K111 Selector switch PI0.07] [P.S007 Resetsafety monitors M14.05] [Ready cleaning M06.10] [

Machine in position 7 M00.07] [Cond. ext. cleaning M06.11] [External cleaning M06.17] / [Delay on ext.clean. M16.17] [Selector switch PI0.07] / [P.S007

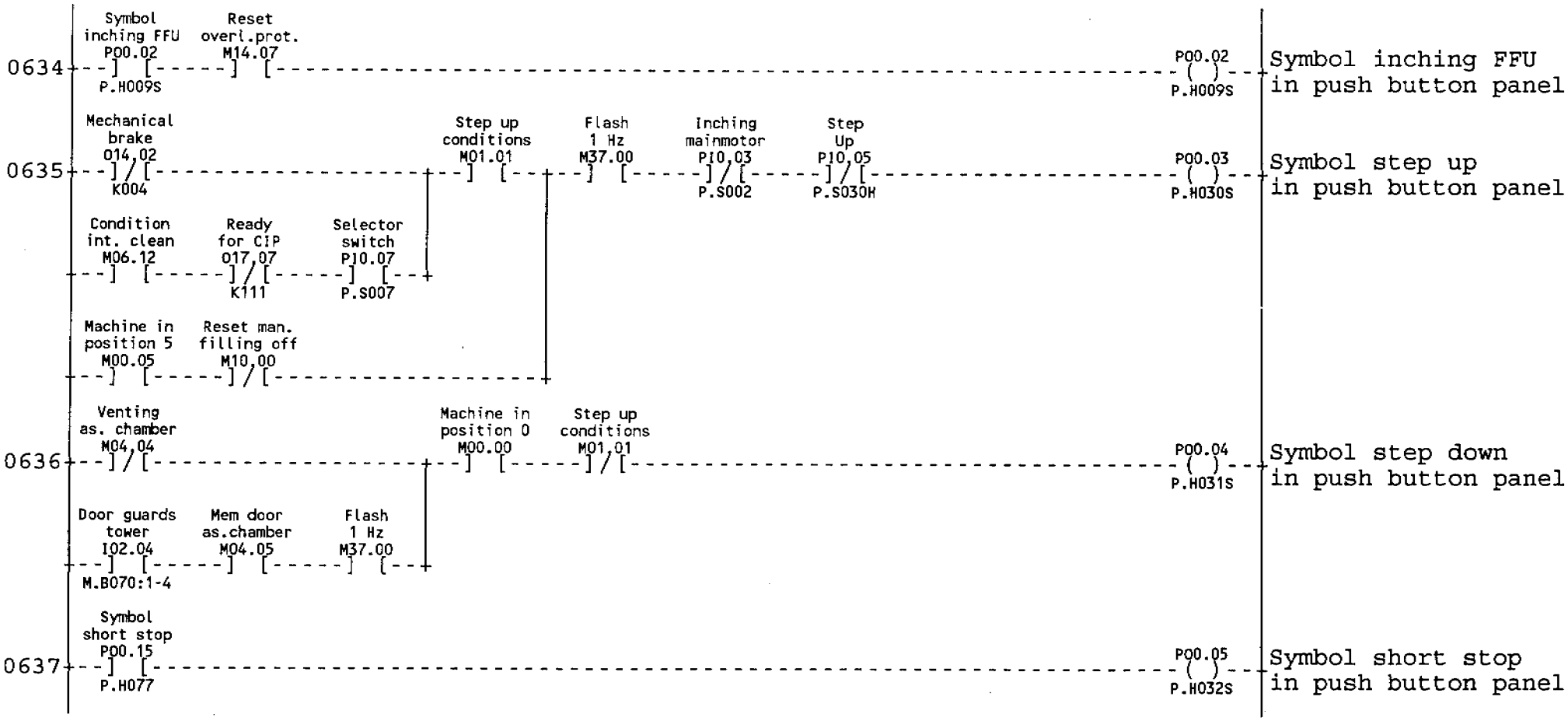
0627

Step up conditions M01.00] [Short stop I02.07] [S003-M.S061 Prepatation switch I02.16] [k128 Reset EM-stop M14.04] [Resetsafety monitors M14.05] [Reset overl.prot. M14.07] [Step down PI0.06] [P.S031H Short stop PI0.12] [P.S032H ---------- M01.01 ( ) Step up conditions in machine ladder

Step up conditions M01.01] [

```
0628 Machine in position 1 M00.01 ASU ready M16.01 Malfunction papersplice M15.10 SA-element temperature I06.04 A205 Reset overl.prot. M14.07 Delay on redundancy M14.16 Alarmstatus in FFU M15.04 ---( )--- M01.02  Inching condition
     Automatic splice M12.04 / Selector switch P10.07 / P.S007
     Machine in position 3 M00.03 Step up conditions M01.01
     Machine in position 4 M00.04 Step up conditions M01.01
     Machine in position 7 M00.07 Ready cleaning M06.10 Cleaningcup in position I04.00 / M.B049 External cleaning M06.17 /

0629 Position machineladd R0000 [GET] * K00000 [=] ---( )--- M00.00  Machineladder in position 0
     * K00001 [=] ---( )--- M00.01  Machineladder in position 1
     * K00002 [=] ---( )--- M00.02  Machineladder in position 2
     * K00003 [=] ---( )--- M00.03  Machineladder in position 3
```

```
0630 Position machineladd R0000 [GET] * [=] K00004 ---------- ( ) M00.04   Machineladder in position 4
     *  [=] K00005 ---------- ( ) M00.05   Machineladder in position 5
     *  [=] K00006 ---------- ( ) M00.06   Machineladder in position 6
     *  [=] K00007 ---------- ( ) M00.07   Machineladder in position 7

0631 Position machineladd R0000 [GET] * [>] K00001 ---------- ( ) M00.11   Machineladder in position 2-7
     *  [>] K00002 ---------- ( ) M00.12   Machineladder in position 3-7
     *  [>] K00003 ---------- ( ) M00.13   Machineladder in position 4-7
     *  [>] K00004 ---------- ( ) M00.14   Machineladder in position 5-7
     *  [>] K00005 ---------- ( ) M00.15   Machineladder in position 6-7

0632 Machine in position 1 M00.01 ] [ Flash 1/2-Hz M04.12 ] [ Selector switch P10.07 P.S007 ]/[ Inching condition M01.02 ] [ Mechanical brake O14.02 K004 ]/[ Inching mainmotor P10.03 P.S002 ]/[ Step Up P10.05 P.S030H ]/[ ( ) P00.01 P.H002S   Symbol inching in push button panel
     Flash 1 Hz M37.00 ] [ Selector switch P10.07 P.S007 ] [

0633 Machine in position 0 M00.00 ]/[ Venting as. chamber M04.04 ]/[ External cleaning M06.17 ]/[ Stop delay of FFU M11.05 ]/[ Aux.output drivemotor M12.01 ]/[ Delay on redundancy M14.16 ] [ Alarmstatus in FFU M15.04 ] [ Flash 1 Hz M37.00 ] [ Start FFU O15.13 G001 ]/[ ( ) P00.02 P.H009S   Symbol inching FFU in push button panel
```


0634
Symbol inching FFU P00.02 P.H009S
Reset overl.prot. M14.07
P00.02 P.H009S
Symbol inching FFU in push button panel
0635
Mechanical brake O14.02 K004
Step up conditions M01.01
Flash 1 Hz M37.00
Inching mainmotor P10.03 P.S002
Step Up P10.05 P.S030H
P00.03 P.H030S
Symbol step up in push button panel
Condition int. clean M06.12
Ready for CIP O17.07 K111
Selector switch P10.07 P.S007
Machine in position 5 M00.05
Reset man. filling off M10.00
0636
Venting as. chamber M04.04
Machine in position 0 M00.00
Step up conditions M01.01
P00.04 P.H031S
Symbol step down in push button panel
Door guards tower I02.04 M.B070:1-4
Mem door as.chamber M04.05
Flash 1 Hz M37.00
0637
Symbol short stop P00.15 P.H077
P00.05 P.H032S
Symbol short stop in push button panel

```
0638 Machine in position 0 M00.00 ---]/[---- Reset EM-stop M14.04 ---[---- Resetsafety monitors M14.05 ---[---- Flash new alarms PI0.02 ---[--*---------------------------------------- P00.06 ( ) P.H033S ---+ Symbol alarm reset
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in push button panel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                

Reset EM-stop M14.04 ---]/[---- Flash 1 Hz M37.00 ---[---------- O16.10 ( ) K202 ---+ Alarm beacon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                

Resetsafety monitors M14.05 ---]/[---+

0639 Machine in position 1 M00.01 ---] [---- Preheating time value CV012 [GET] ---- K00060 [<] ---------- PL6.13 ( ) P.H104 ---+ 100% to 80% time left
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                

Service switch I03.07 S005 ---]/[---- Spraying fullfilled M11.16 ---] [---- Machine in position 3 M00.03 ---] [---- Sequenser drying CV007 [GET] ---- K00300 [<] ---+

Service switch I03.07 S005 ---]/[---- Short stop on M06.07 ---] [---- Short stop time value TV003 [GET] ---- K00180 [<] ----------+

Venting as. chamber M04.04 ---] [---- Venting 5 minutes M04.06 ---] [---- Venting time value TV013 [GET] ---- K00060 [<] ----------+

Venting as. chamber M04.04 ---] [---- Venting 15 minutes M04.07 ---] [---- Venting time value TV013 [GET] ---- K00180 [<] ----------+

External cleaning M06.17 ---] [---- Cleaning time value CV003 [GET] ---- K00144 [<] ----------+
```

```
0640 Machine in position 1 M00.01 ---] [---- Preheating time value CV012 [GET] ---- K00120 [<] ----------+---------- PL6.12 ( ) P.H105 ---+ 80% to 60% time left
     |
     | Service switch I03.07 S005 ---]/[----- Spraying fullfilled M11.16 ]-----[ Machine in position 3 M00.03 ]-----[ Sequenser drying CV007 [GET] ---- K00600 [<] ---+
     | Service switch I03.07 S005 ---]/[----- Short stop on M06.07 ]-----[ Short stop time value TV003 [GET] ---- K00360 [<] ----------+
     | Venting as. chamber M04.04 ---] [----- Venting 5 minutes M04.06 ]-----[ Venting time value TV013 [GET] ---- K00120 [<] ----------+
     | Venting as. chamber M04.04 ---] [----- Venting 15 minutes M04.07 ]-----[ Venting time value TV013 [GET] ---- K00360 [<] ----------+
     | External cleaning M06.17 ---] [---- Cleaning time value CV003 [GET] ---- K00288 [<] ----------+
     |
```

```
      Machine in   Preheating
      position 1   time value
        M00.01       CV012        K00180                                                          PL6.11
0641 --]  [----  [GET] ----  [<] ----------------------------------------------------------------( )---60% to 40% time left
                                                                                                  P.H106

      Service      Spraying     Machine in   Sequenser
      switch       fullfilled   position 3   drying
      I03.07       M11.16       M00.03       CV007        K00900
  --]/[------]  [------]  [----  [GET] ----  [<] --+
       S005                                         |
                                                    |
      Service      Short stop   Short stop
      switch       on           time value
      I03.07       M06.07       TV003        K00540
  --]/[------]  [----  [GET] ----  [<] ----------+
       S005                                      |
                                                 |
      Venting      Venting      Venting
      as. chamber  5 minutes    time value
      M04.04       M04.06       TV013        K00180
  --]  [------]  [----  [GET] ----  [<] ----------+
                                                 |
      Venting      Venting      Venting
      as. chamber  15 minutes   time value
      M04.04       M04.07       TV013        K00540
  --]  [------]  [----  [GET] ----  [<] ----------+
                                                 |
      External     Cleaning
      cleaning     time value
      M06.17       CV003        K00432
  --]  [----  [GET] ----  [<] ------------------+
```

```
      Machine in   Preheating
      position 1   time value
        M00.01       CV012        K00240                                                   PL6.10
0642 --]  [---- [GET] ---- [<] ----------------------------------------------------------( )---40% to 20% time left
                                                                                           P.H107

      Service      Spraying     Machine in   Sequenser
       switch      fullfilled   position 3    drying
       I03.07       M11.16       M00.03       CV007        K01200
    --]/[-----]  [-----]  [---- [GET] ---- [<] --+
       S005
      Service      Short stop   Short stop
       switch        on         time value
       I03.07       M06.07       TV003        K00720
    --]/[-----]  [---- [GET] ---- [<] ----------+
       S005
      Venting      Venting      Venting
     as. chamber   5 minutes    time value
       M04.04       M04.06       TV013        K00240
    --]  [-----]  [---- [GET] ---- [<] ----------+
      Venting      Venting      Venting
     as. chamber   15 minutes   time value
       M04.04       M04.07       TV013        K00720
    --]  [-----]  [---- [GET] ---- [<] ----------+
      External     Cleaning
      cleaning     time value
       M06.17       CV003        K00576
    --]  [---- [GET] ---- [<] ----------------------+
```

```
      Machine in   Preheating
      position 1   time value
        M00.01       CV012        K00300
0643 --]  [----  [GET] ----  [<] ----------------------------------------------------------- PL6.07 ( ) --- 20% to 0% time left
                                                                                              P.H108

      Service      Spraying     Machine in   Sequenser
      switch       fullfilled   position 3   drying
      I03,07       M11.16       M00.03       CV007        K01500
    --]/[-----]  [-----]  [----  [GET] ----  [<] ---
        S005

      Service      Short stop   Short stop
      switch       on           time value
      I03,07       M06.07       TV003        K00900
    --]/[-----]  [----  [GET] ----  [<] ----------
        S005

      Venting      Venting      Venting
      as. chamber  5 minutes    time value
      M04.04       M04.06       TV013        K00300
    --]  [-----]  [----  [GET] ----  [<] ----------

      Venting      Venting      Venting
      as. chamber  15 minutes   time value
      M04.04       M04.07       TV013        K00900
    --]  [-----]  [----  [GET] ----  [<] ----------

      External     Cleaning
      cleaning     time value
      M06.17       CV003        K00720
    --]  [----  [GET] ----  [<] ----------------------

      Machine in   Symbol       Selector     Preheating
      position 0   step up      switch       ready
      M00.00       P00.03       P10.07       M06,03
0644 --]  [-----]  [-----]  [-----]/[------------------------------------------------------------ PL6.14 ( ) --- Symbol preheating
                   P.H030S      P.S007                                                            P.H109

      Machine in   Preheating
      position 1   I
      M00.01       O15.00
    --]  [-----]  [----------
                   K018

      Machine in   Preheating   Tubesealing
      position 1   ready        going on
      M00.01       M06.03       M12,00
0645 --]  [-----]  [-----]/[------------------------------------------------------------------ PL6.15 ( ) --- Symbol preheating
                                                                                              P.H110          finished
```

```
      Machine in   Step up      Symbol      Sterilecond
      position 1   conditions   step up     bypassed
        M00.01      M01.01      P00.03      M10.01
0646 --]  [-----]  [-----]  [-----]/{-------------------------------------------( PL6.16 )--- Symbol tube sealing
                                P.H030S                                          P.H111
      Tubesealing
       going on
        M12.00
     --]  [-------------------+

      Machine in
      position 2
        M00.02
0647 --]  [-------------------------------------------------------------------( PL6.17 )--- Symbol tube sealing
                                                                                 P.H112      finished

      Machine in   Symbol      Step up
      position 2   step up     conditions
        M00.02      P00.03      M01.01
0648 --]  [-----]  [-----]  [-----+-------------------------------------------( PL7.00 )--- Symbol spraying
                    P.H030S                                                      P.H113

      Machine in   Spraying
      position 3   fullfilled
        M00.03      M11.16
     --]  [-----]/[-----------+

      No sterile   Machine in   Spraying
      cond.bypass  position 3   fullfilled
        M12.10      M00.03      M11.16
0649 --]  [-----]  [-----]  [-------------------------------------------------( PL7.01 )--- Symbol drying
                                                                                 P.H114

      Sterilecond
       bypassed
        M10.01
     --]  [---+
```

```
      Machine in   Sterilecond   Symbol
      position 1   bypassed      step up
        M00.01      M10.01       P00.03
0650 --]  [-----]  [--+--]  [--+------------------------------------------------------( )--+ Symbol signal to
                      |         P.H030S                                                P.H115  sterilizer
      Machine in   Drying       |
      position 3   fullfilled   |
        M00.03      M11.17      |
     +--]  [-----]  [--+        |
      Machine in   Signal from  |
      position 4   sterilizer   |
        M00.04      M10.03      |
     +--]  [-----]/[-----------+

      Machine in   Signal from
      position 4   sterilizer
        M00.04      M10.03
0651 --]  [--+--]  [-----------+------------------------------------------------------( )--+ Symbol signal from
                |                                                                     P.H116  sterilizer
      Short stop |  Sterilecond  Symbol sign
        on       |  bypassed     to steriliz
      M06.07     |   M10.01       PL7.02
     +--]  [--+--]  [-----]  [--+
                                 P.H115

      Symbol      Machine in    Machine in    End start
      step up     position4-7   position 7    sequence
      P00.03       M00.13       M00.07        T0000.1
0652 --]  [-----]  [--+--]/[-----]/[-------------------------------------------------( )--+ Symbol motorstart
      P.H030S            |                     10s0                                  P.H117
                         |                     15s2
      Ready for          |
      motor start        |
      T0000.0            |
     +--]  [-----------+
        0s0
       15s0

      Machine in    End start
      position 6    sequence
       M00.06       T0000.1
0653 --]/[-----]  [-------------------------------------------------------------------( )--+ Symbol drivemotor on
                  10s0                                                              P.H118
                  15s2
```

0654
Machine in position 5 M00.05] [
Reset man. filling off M10.00] / [
Symbol step up P00.03] [P.H030S
Machine in position 6 M00.06] [
Short stop on M06.07] / [
Machine in design M11.11] / [
PL7.06 ( ) P.H119 — Symbol filling on

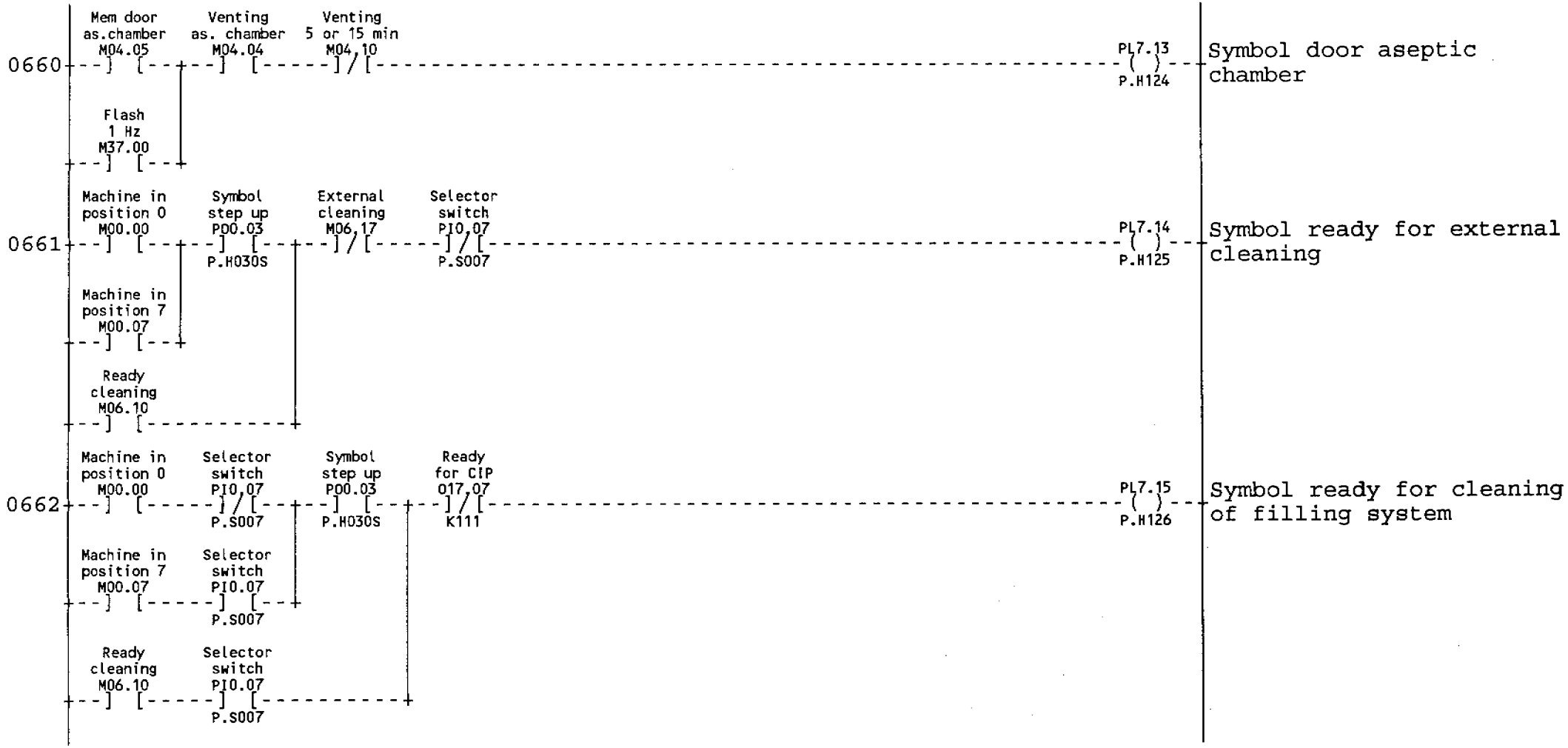
0655
Machine in position 6 M00.06] [
Short stop on M06.07] / [
Machine in design M11.11] [
PL7.07 ( ) P.H120 — Symbol production

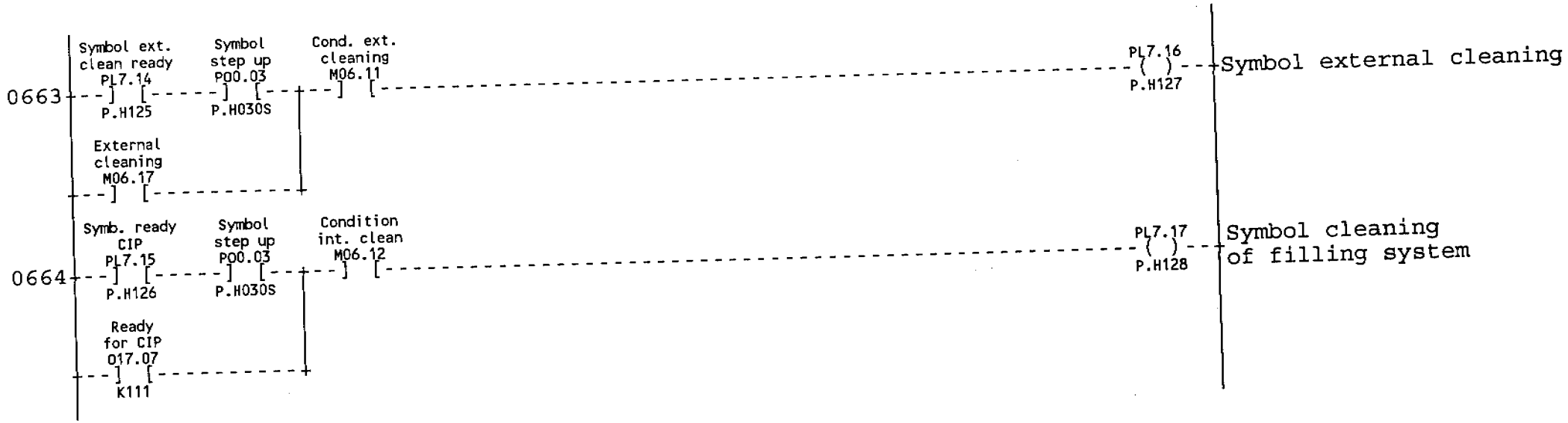
0656
Alarm short stop time T0003.1] [0s 14m00s
Short stop on M06.07] [
Flash 1 Hz M37.00] [
Sterilecond bypassed M10.01] [
PL7.10 ( ) P.H121 — Symbol short stop

0657
Symbol short stop PL7.10] [P.H121
P00.05 ( ) P.H032S — Symbol short stop in push button panel

0658
Machine in position 7 M00.07] [
Preheating I 015.00] [K018
PL7.11 ( ) P.H122 — Symbol production finished

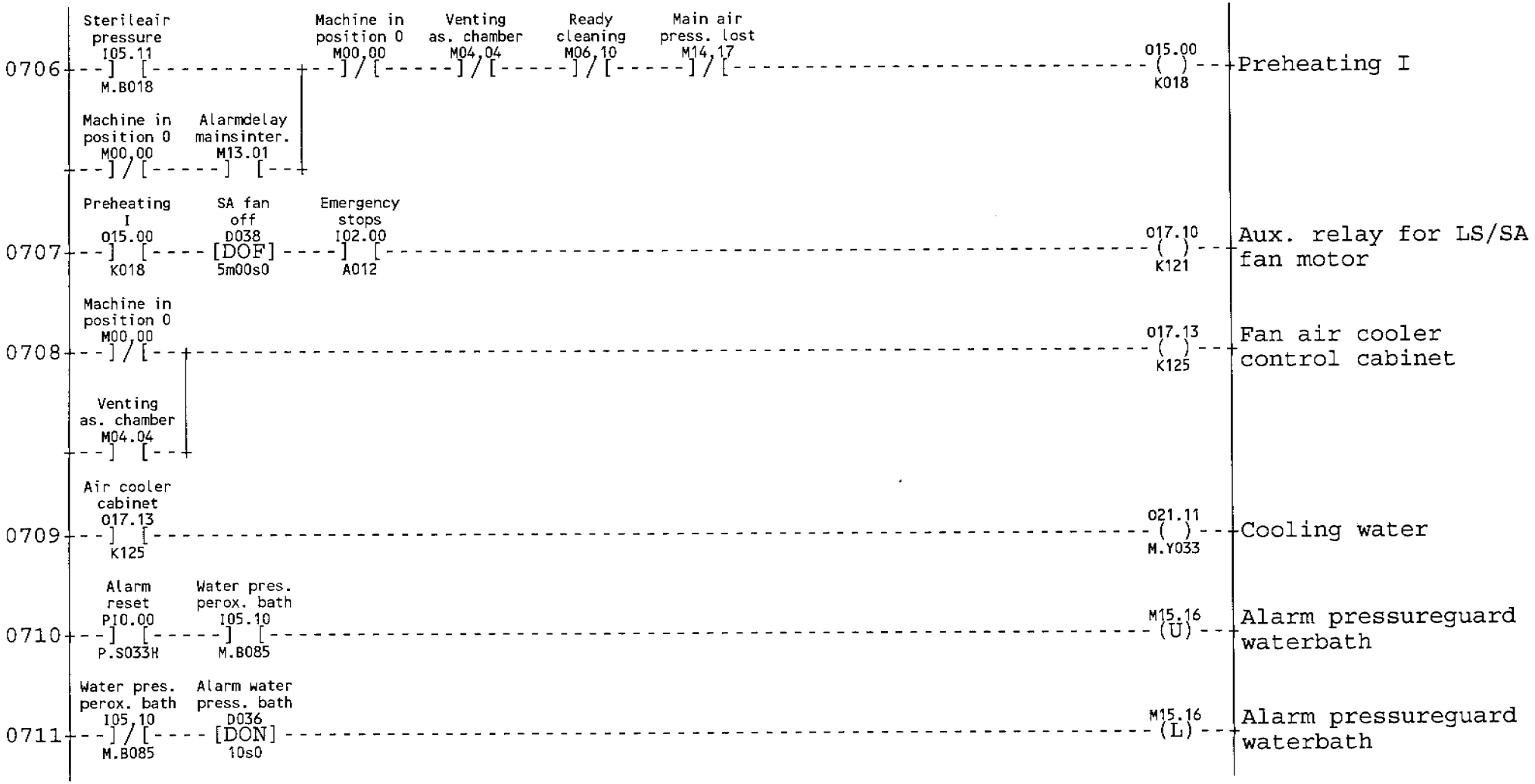
0659
Venting as. chamber M04.04] [
PL7.12 ( ) P.H123 — Symbol venting aseptic chamber


0660
Mem door as.chamber M04.05
Venting as. chamber M04.04
Venting 5 or 15 min M04.10
Flash 1 Hz M37.00
PL7.13 P.H124
Symbol door aseptic chamber
0661
Machine in position 0 M00.00
Symbol step up P00.03 P.H030S
External cleaning M06.17
Selector switch PI0.07 P.S007
Machine in position 7 M00.07
Ready cleaning M06.10
PL7.14 P.H125
Symbol ready for external cleaning
0662
Machine in position 0 M00.00
Selector switch PI0.07 P.S007
Symbol step up P00.03 P.H030S
Ready for CIP O17.07 K111
Machine in position 7 M00.07
Selector switch PI0.07 P.S007
Ready cleaning M06.10
Selector switch PI0.07 P.S007
PL7.15 P.H126
Symbol ready for cleaning of filling system


0663
Symbol ext. clean ready
PL7.14
P.H125
Symbol step up
P00.03
P.H030S
Cond. ext. cleaning
M06.11
External cleaning
M06.17
PL7.16
P.H127
Symbol external cleaning
0664
Symb. ready CIP
PL7.15
P.H126
Symbol step up
P00.03
P.H030S
Condition int. clean
M06.12
Ready for CIP
O17.07
K111
PL7.17
P.H128
Symbol cleaning of filling system

PREHEATING

```
0701 --[BLK]07 ----------------------------------------------------------------------------------------
     Machine in                                  Emergency      Ready
     position 0                                  stops          cleaning
     M00.00                                      I02.00         M06.10
0702 ---]/[-----------------------------------]---[-----]/[-----------------------------------------( )--- Sterile air compressor
                                                 A012                                              K010
     Venting
     as. chamber
     M04.04
     ---]  [-----------------------------------+
     Step up        Step          Selector
     conditions     Up            switch
     M01.01         P10.05        P10.07
     ---]  [-----]  [-----]  [---+
                    P.S030H       P.S007
     Separator
     level
     I05.17                                                                                  M10.17
0703 ---]  [-------------------------------------------------------------------------------------(L)--- High level separator
     A304
     Separator      Alarm
     level          reset
     I05.17         P10.00
0704 ---]/[-----]  [-------------------------------------------------------------------------------(U)--- High level separator
     A304           P.S033H
     Machine in
     position 0
     M00.00                                                                                  015.02
0705 ---]/[---+-------------------------------------------------------------------------------( )--- Power on
                                                                                             K005
     Venting
     as. chamber
     M04.04
     ---]  [---+
```


0706
Sterileair pressure I05.11 M.B018
Machine in position 0 M00,00
Alarmdelay mainsinter. M13.01
Machine in position 0 M00,00
Venting as. chamber M04,04
Ready cleaning M06,10
Main air press. lost M14,17
O15.00 K018
Preheating I
0707
Preheating I O15.00 K018
SA fan off D038 [DOF] 5m00s0
Emergency stops I02.00 A012
O17.10 K121
Aux. relay for LS/SA fan motor
0708
Machine in position 0 M00,00
Venting as. chamber M04.04
O17.13 K125
Fan air cooler control cabinet
0709
Air cooler cabinet O17.13 K125
O21.11 M.Y033
Cooling water
0710
Alarm reset PI0.00 P.S033R
Water pres. perox. bath I05.10 M.B085
M15.16 (U)
Alarm pressureguard waterbath
0711
Water pres. perox. bath I05.10 M.B085
Alarm water press. bath D036 [DON] 10s0
M15.16 (L)
Alarm pressureguard waterbath

0712 — Preheating I O15.00] [K018 — Ready cleaning M06.10] [— Inching condition M01.02] [— Machine in position 0 M00.00]/[— Machine in position 7 M00.07]/[— Bend.roller power O14.04] [K007-K008 — O14.04 ( ) K007-K008 — Bending rollers power

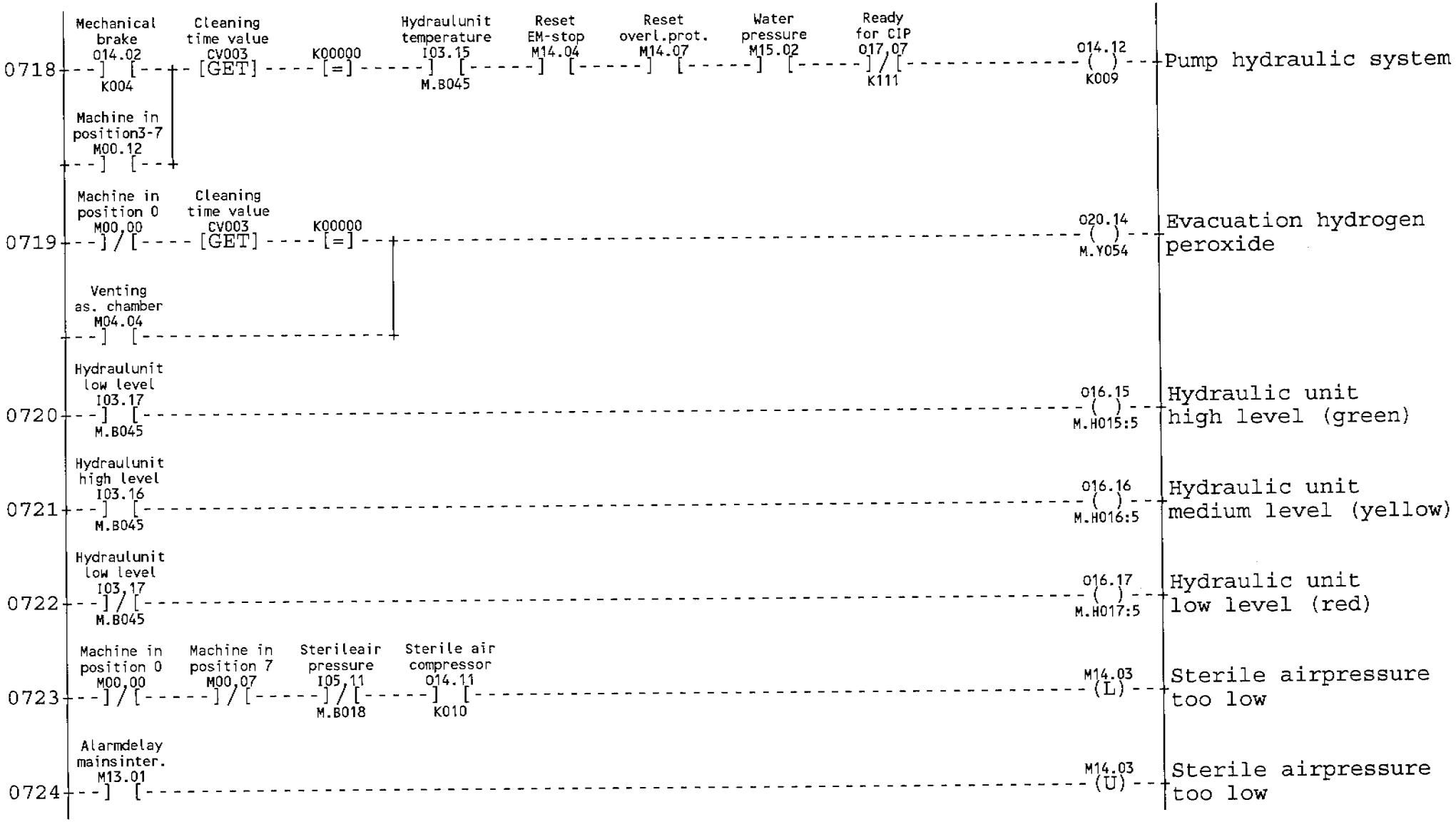
0713 — Press.guard waterbath M15.16]/[— Preheating I O15.00] [K018 — O15.11 ( ) K019 — Hydrogen peroxide bath element

0714 — SA-element temperature I06.04] [A205 — LS-element temperature I06.05] [A206 — Flash 1 Hz M37.00] [— Preheating finished C0012.0]/[300-310 — C012 (CTU) — Delay preheating ready

0715 — Sterile air compressor O14.11]/[K010 — C012 (CTR) — Delay preheating ready

0716 — SA-element temperature I06.04]/[A205 — LS-element temperature I06.05]/[A206 — Temperature LS/SA D050 [DON] 15s00 — Preheating I O15.00] [K018 — M10.12 ( ) — Temperature LS/SA out of limit

0717 — Preheating finished C0012.0] [300-310 — SA-element temperature I06.04] [A205 — LS-element temperature I06.05] [A206 — M06.03 ( ) — Preheating ready


0718
Mechanical brake 014.02 K004
Machine in position3-7 M00.12
Cleaning time value CV003 [GET]
K00000 [=]
Hydraulunit temperature I03.15 M.B045
Reset EM-stop M14.04
Reset overl.prot. M14.07
Water pressure M15.02
Ready for CIP 017.07 K111
014.12 K009
Pump hydraulic system
0719
Machine in position 0 M00.00
Cleaning time value CV003 [GET]
K00000 [=]
Venting as. chamber M04.04
020.14 M.Y054
Evacuation hydrogen peroxide
0720
Hydraulunit low level I03.17 M.B045
016.15 M.H015:5
Hydraulic unit high level (green)
0721
Hydraulunit high level I03.16 M.B045
016.16 M.H016:5
Hydraulic unit medium level (yellow)
0722
Hydraulunit low level I03.17 M.B045
016.17 M.H017:5
Hydraulic unit low level (red)
0723
Machine in position 0 M00.00
Machine in position 7 M00.07
Sterileair pressure I05.11 M.B018
Sterile air compressor 014.11 K010
M14.03 (L)
Sterile airpressure too low
0724
Alarmdelay mainsinter. M13.01
M14.03 (U)
Sterile airpressure too low

0725 Machine in position 0 M00.00] [Alarm reset PI0.00] [P.S033H — M14.03 (U) — Sterile airpressure too low

0726 Cleaningcup in position I04.00]/[M.B049; Clean.pipe1 in position I05.04]/[M.B068:1; Clean.pipe2 in position I05.05]/[M.B068:2; Ster. air pipe jetdiv I05.06] [M.B103; Ster. air pipe B-val. I05.07] [M.B104; Productpipe position I05.02] [M.B051; Machine in position 7 M00.07]/[; Ready cleaning M06.10]/[; Selector switch PI0.07]/[P.S007 — M06.01 ( ) — Cleaningpipes in wrong position for preheating

0727 Machine in position 0 M00.00] [— C016 (CTR) — Delay on display temperature

0728 Machine in position 0 M00.00]/[Flash 1 Hz M37.00] [Delay disp. 16 minutes C0016.0]/[960-965 — C016 (CTU) — Delay on display temperature

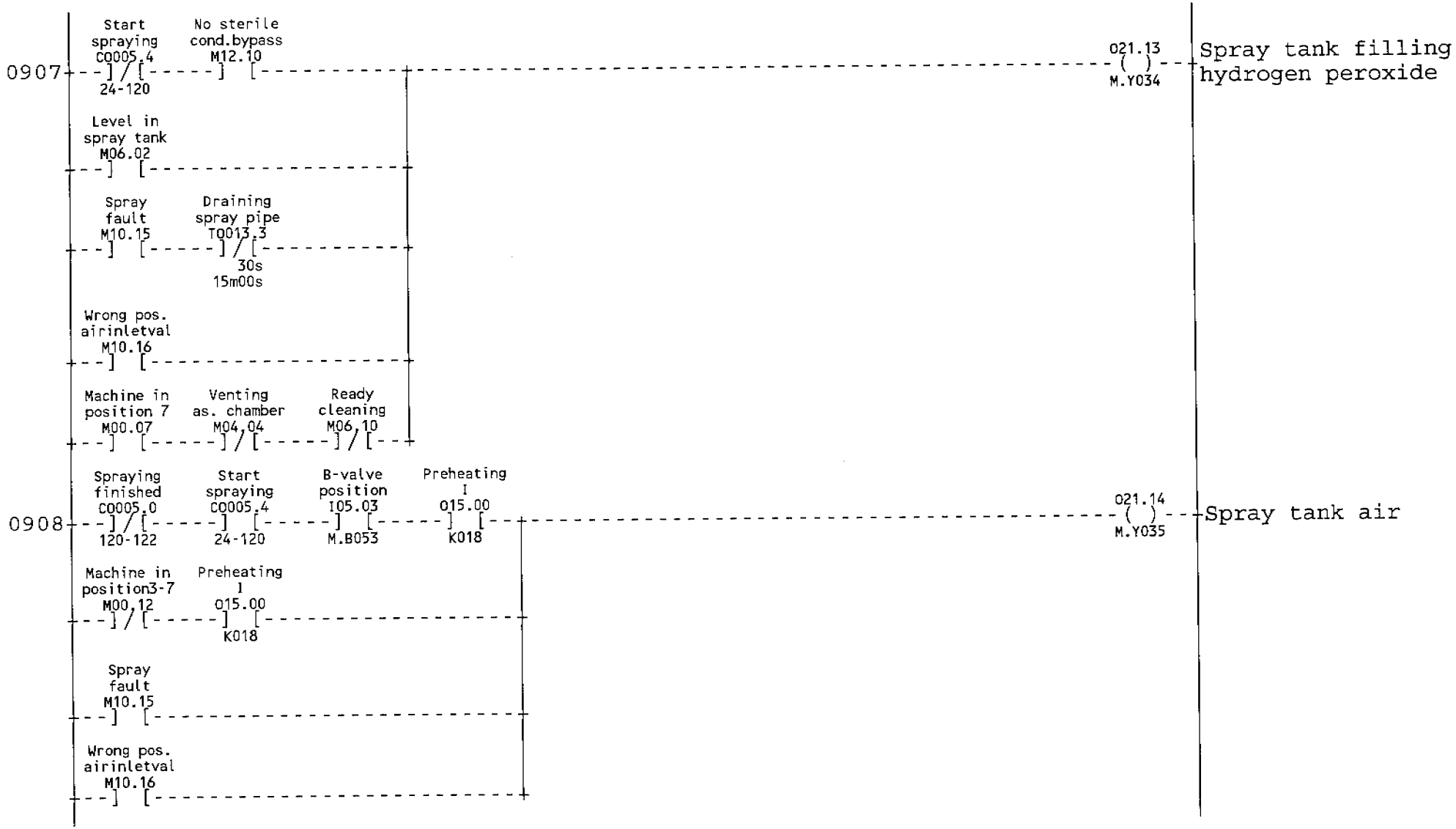
0729 Alarmdelay mainsinter. M13.01] [Delay disp. value stor. CV016 [GET] — CV016 (PUT) — Delay on display temper. value stored

TUBESEALING

```
0801 | --[BLK]08 ----------------------------------------------------------------------------|
     |
     |  Outputpulse   Inching     Machine in   Step up     Sterilecond
     |   step up      mainmotor   position 1   conditions  bypassed
     |   M02.00       PI0.03      M00.01       M01.01      M10.01                          M12.00
0802 |--]  [------]/[--+--]  [------]  [------]/[-----------------------------------------( )---| Tubesealing
     |                 P.S002  |                                                                going on
     |
     |  Outputpulse   Tubesealing
     |   step down    going on
     |   M02.01       M12.00
     +--]/[------]  [--+
     |
```

SPRAYING

```
0901 --[BLK]09 ----------------------------------------------------------------------------------------------
     Machine in   Venting      Ready      Sterilecond
     position3-7  as. chamber  cleaning   bypassed
       M00.12     M04.04       M06.10     M10.01
0902 ---] [-----]/[-----]/[-----]/[-------------------------------------------------------------------( )---M12.10  No sterile conditions
                                                                                                            by-passed
     Machine in   Flash        Spraying
     position3-7  1 Hz         finished
       M00.12     M37.00       C0005.0
0903 ---] [-----] [-----]/[-------------------------------------------------------------------(CTU)---C005  Sequencer for spraying
                              120-122
     No sterile
     cond.bypass
       M12.10
0904 ---]/[-------------------------------------------------------------------------------------(CTR)---C005  Sequencer for spraying
     Alarm        Machine in   Peroxide
     reset        position 2   spray level
       PI0.00       M00.02       I05.15
0905 ---] [-----] [---+---] [-------------------------------------------------------------------(L)---M06.02  Level in spray tank
     P.S033H          |        A302                                                                         after spray fault
     Spraying         |
     fullfilled       |
       M11.16         |
     ---] [-----------+
     Peroxide
     spray level
       I05.15
0906 ---]/[-------------------------------------------------------------------------------------(U)---M06.02  Level in spray tank
     A302                                                                                                   after spray fault
```


0907
Start spraying C0005.4 24-120
No sterile cond.bypass M12.10
Level in spray tank M06.02
Spray fault M10.15
Draining spray pipe T0013.3 30s 15m00s
Wrong pos. airinletval M10.16
Machine in position 7 M00.07
Venting as. chamber M04.04
Ready cleaning M06.10
021.13 M.Y034
Spray tank filling hydrogen peroxide
0908
Spraying finished C0005.0 120-122
Start spraying C0005.4 24-120
B-valve position I05.03 M.B053
Preheating I 015.00 K018
Machine in position3-7 M00.12
Preheating I 015.00 K018
Spray fault M10.15
Wrong pos. airinletval M10.16
021.14 M.Y035
Spray tank air

```
     Service     Machine in   Preheating
      switch     position3-7      I
      I03.07      M00.12      O15.00                                          O20.07
0909 ---] [------] [------] [--+-------------------------------------------( )---+ Preheating,air inlet and
       S005                    K018  |                                      M.Y044  heat exchanger valve
                                     |
     Venting                         |
     as. chamber                     |
     M04.04                          |
   ---] [-------------------------+--+
                                     |
     Spray       Wrong pos.   Air inlet                                      |
     fault       airinletval  valve over                                     |
     M10.15       M10.16      C0005.1                                        |
   ---]/[------+---]/[------] [--+--+                                        |
                |              20-120                                        |
                |                                                            |
     Spray fault |                                                            |
      upfilling |                                                            |
      C0005.5   |                                                            |
   ---] [------+                                                            |
       19-45                                                                 |
                                                                             |
     Peroxide    Spray fault  Wrong pos.                                     |
     spray level  upfilling   airinletval                                    |
      I05.15      C0005.5      M10.16                                         |
0910 ---]/[------] [------+---]/[-------------------------------------------( )---+ Malfunction during
       A302        19-45   |                                            M10.15 (L)  spray sequence
                           |                                                      |
     Peroxide    Spray fault |                                                    |
     spray level  upper limit |                                                    |
      I05.15      C0005.3    |                                                    |
   ---] [------] [------+--+                                                    |
       A302        60-120                                                      |
                                                                               |
     Machine in   Venting                                                      |
     position 0   15 minutes                                                   |
      M00.00      M04.07                                                       |
0911 ---] [------]/[-------------------------------------------------------( )---+ Malfunction during
                                                                          M10.15 (U)  spray sequence
     Machine in   Alarm                                                        |
     position 2   reset                                                        |
      M00.02      P10.00                                                       |
   ---] [------] [------+--+                                                    |
                  P.S033H  |                                                    |
                           |                                                    |
     Machine in   Alarmdelay                                                   |
     position3-7  mainsinter.                                                  |
      M00.12      M13.01                                                       |
   ---] [------] [------+--+                                                    |
```

```
0912 Presteril. valve pos. I05.12 ]/[ M.B071 ; Machine in position3-7 M00.12 ]/[ ; Machine in position3-7 M00.12 ] [ ; Alarmdelay mainsinter. M13.01 ] [ --- M10.16 (U) --- Sterileairinlet valve in wrong position

0913 Presteril. valve pos. I05.12 ]/[ M.B071 ; Air inlet valve Q20.07 ] [ M.Y044 ; Sterileair inlet wrong D097 [DON] 4s0 ; Presteril. valve pos. I05.12 ] [ M.B071 ; Machine in position 1 M00.01 ] [ --- M10.16 (L) --- Sterileairinlet valve in wrong position

0914 Spraying finished C0005.0 ] [ 120-122 ; Machine in position 0 M00.00 ]/[ ; Service switch I03.07 ] [ S005 ; Ready cleaning M06.10 ]/[ --- M11.16 ( ) --- Spraying fullfilled
```

TPMC-PROGRAMME LIST

DRYING

```
1001 --[BLK]10 ------------------------------------------------------------------------------------------------------------

     Drying time   Flash      Spraying
      finished     1 Hz       fullfilled
      C0007.0      M37.00     M11.16                                                                   C007
1002 ---]/[------]  [------]  [-------------------------------------------------------------------(CTU)--Sequencer for drying
      1500-1510

     No sterile
     cond.bypass
      M12.10
1003 ---]/[-----------------------------------------------------------------------------------------(CTR)--Sequencer for drying
                                                                                                     C007

     Service      Presteril.   B-valve     Machine in   Venting
      switch      valve pos.   closed      position 3   5 minutes
      I03.07      I05.12       C0007.2     M00.03       M04.06                                        O20.04
1004 ---]/[------]  [------]  [------]  [---+---]/[-------------------------------------------------( )---Sterile air valve (B)
      S005        M.B071       0-1200                  |                                              M.Y008
                                                       |
     Clean.thr.   Main air     Ready
      prod.valve  pressure     for CIP
      I03.05      I03.11       O17.07                  |
     +---]/[------]  [------]  [-----------+
      X1.362      M.B002       K111

     Drying time   Machine in   Spraying
      finished     position3-7  fullfilled
      C0007.0      M00.12       M11.16                                                                   M11.17
1005 ---]  [---+---]  [------]  [-------------------------------------------------------------------( )---Drying fullfilled
      1500-1510 |
                |
     Service    |
      switch    |
      I03.07    |
     +---]  [---+
      S005

     Alarm
      reset
      PI0.00                                                                                           M06.16
1006 ---]  [-----------------------------------------------------------------------------------------(U)---Wrong position of
      P.S033H                                                                                                AP-valve (B)
```

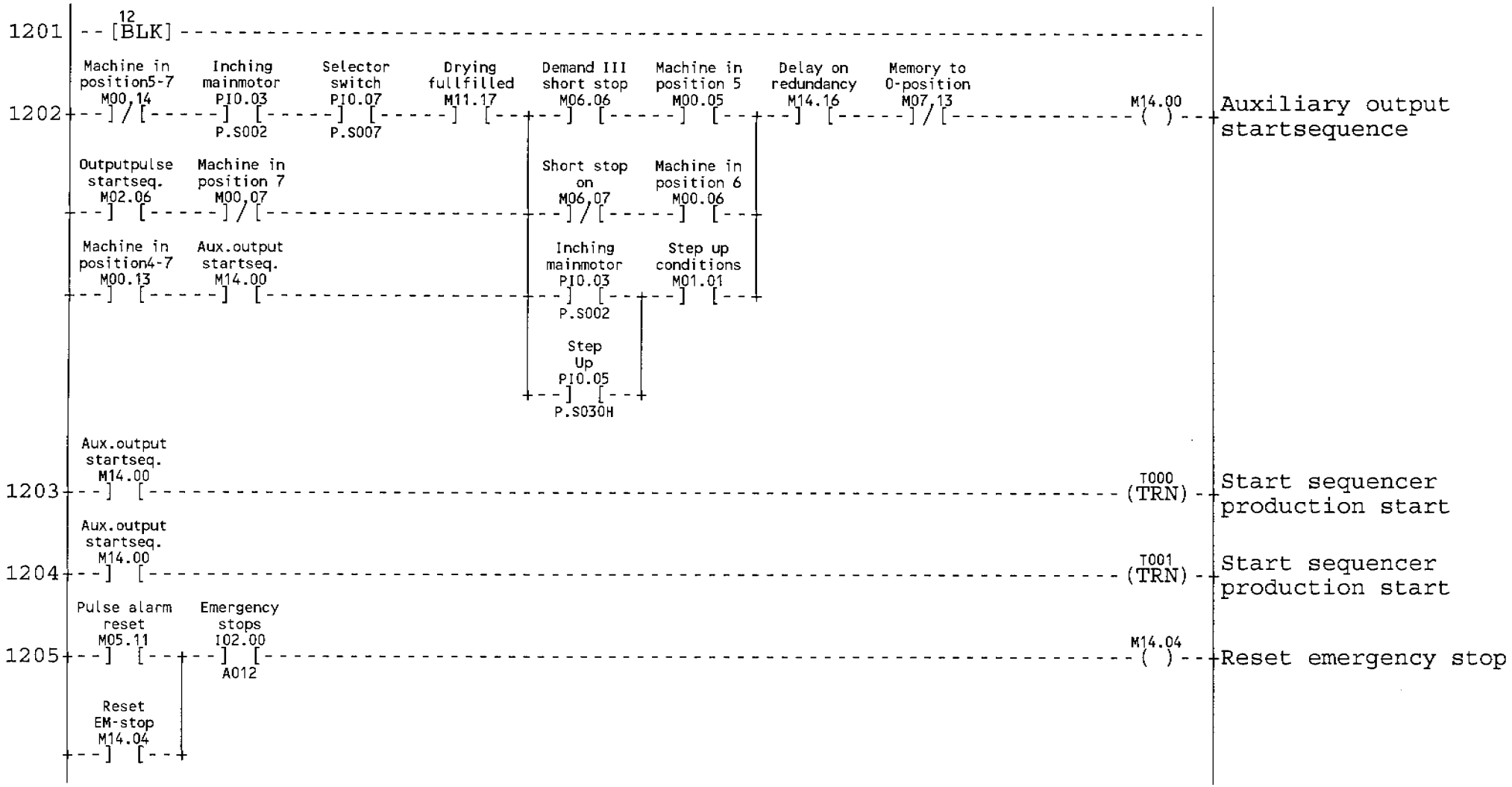
```
      B-valve      Sterile air    Position
      position     valve (B)      of B-valve
      I05.03       O20.04         D013
1007 --]/[-----]  [--+-[DON]------------------------------------------(L)--+ Wrong position of
      M.B053       M.Y008 |       5s00                                M06.16  AP-valve (B)
                          |
      B-valve      Sterile air    |
      position     valve (B)      |
      I05.03       O20.04         |
     --]  [-----]/[--+
      M.B053       M.Y008

      Start        Spray fault    B-valve
      spraying     upfilling      position
      C0005.4      C0005.5        I05.03
1008 --]  [-----]  [-----]/[--+-----------------------------------------(L)--+ Wrong position of
      24-120       19-45          M.B053                              M06.16  AP-valve (B)
                                          |
      Machine in   Machine in     B-valve |
      position4-7  position 7     position |
      M00.13       M00.07         I05.03  |
     --]  [-----]/[-----]  [--+
                                 M.B053

      Alarm
      reset
      PI0.00
1009 --]  [-----------------------------------------------------------(U)--+ Supervision of B-valve
      P.S033H                                                         M06.13  during internal cleaning

      Ready        Wrong pos.
      cleaning     AP-valve(B)
      M06.10       M06.16
1010 --]  [--+--]  [-----------------------------------------------------(L)--+ Supervision of B-valve
                |                                                     M06.13  during internal cleaning
      Drying    |
      fullfilled |
      M11.17    |
     --]  [--+

      Preheat.II   Air flap-
      flap.seal.   element off
      O15.04       D033
1011 --]  [----[DOF]-----------------------------------------------------( )--+ Flap sealing air FFU
      K022         5m00s                                           O20.10
                                                                   M.Y001
```

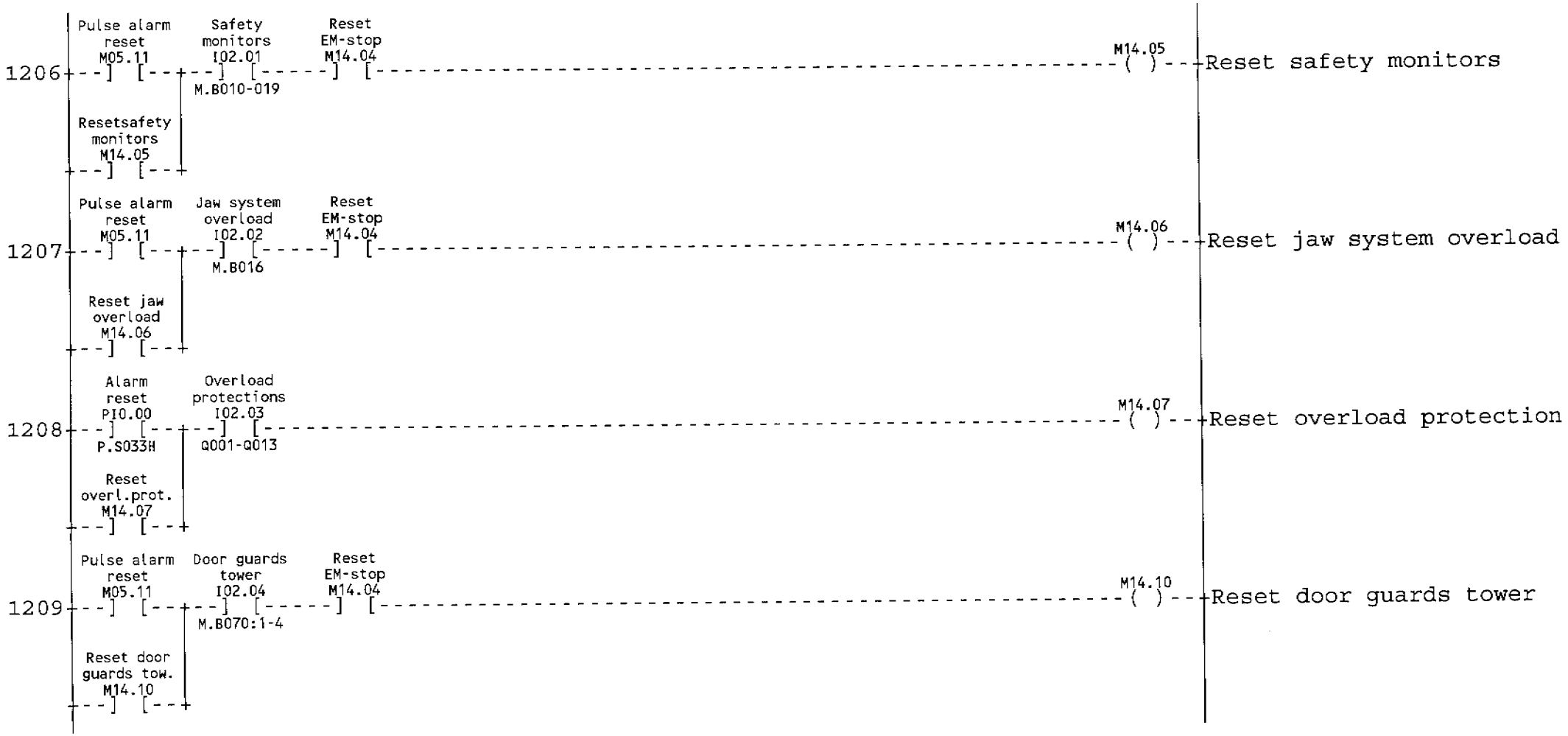
```
     | Spraying   Start pre-                                                                  |
     | fullfilled heating II                                                                  |
1012 +---] [-----] [-----------+-----------------------------------------------------( )---+ Preheating II
     |  M11.16    C0007.3     |                                                     O15.04  | flapsealing FFU on
     |            600-1510    |                                                       K022  |
     | Service    Machine in  Machine in                                                     |
     | switch     position 0  position 7                                                     |
     +---] [-----]/[-----]/[--+                                                                |
     |  I03.07    M00.00      M00.07                                                         |
     |  S005                                                                                 |
```

SIGNALS TO AND FROM STERILIZER

```
1101 --[BLK]11 ----------------------------------------------------------------------------
     Machine in   Machine in
     position 7   position4-7
       M00.07       M00.13
1102 ---]/[-----]  [-------------------------------------------------------------------( )--- Process signal
                                                                                     O17.04  request for product
                                                                                      K108
     Product at
      machine
      I03.04
1103 ---]  [-------------------------------------------------------------------------(L)--- Memory signal recived
      X1.377                                                                          M10.03  from sterilizer
     Request for
      product
      O17.04
1104 ---]/[-------------------------------------------------------------------------(U)--- Memory signal recived
      K108                                                                            M10.03  from sterilizer
     Machine in   Short stop   Sterilecond
      position 6     on         bypassed
       M00.06      M06.07      M10.01
1105 ---]  [-----]/[-----]/[-------------------------------------------------------------( )--- Process signal
                                                                                     O17.05  in production
                                                                                      K109
     Reset man.   Machine in   Aux.output   Inching
      filling off   design     startseq.    mainmotor
       M10.00      M11.11      M14.00       PI0.03
1106 ---]/[-----]/[-----]  [-----]/[-------------------------------------------------------( )--- Process signal
                                   P.S002                                            O17.06  filling on
                                                                                      K110
     Machine in
      position 6
       M00.06
     ---]  [-----------------------------
```

STARTSEQUENCER FOR RUNNING PRODUCTION




1206
Pulse alarm reset M05.11
Safety monitors I02.01
M.B010-019
Reset EM-stop M14.04
Resetsafety monitors M14.05
M14.05
Reset safety monitors
1207
Pulse alarm reset M05.11
Jaw system overload I02.02
M.B016
Reset EM-stop M14.04
Reset jaw overload M14.06
M14.06
Reset jaw system overload
1208
Alarm reset PI0.00
P.S033H
Overload protections I02.03
Q001-Q013
Reset overl.prot. M14.07
M14.07
Reset overload protection
1209
Pulse alarm reset M05.11
Door guards tower I02.04
M.B070:1-4
Reset EM-stop M14.04
Reset door guards tow. M14.10
M14.10
Reset door guards tower

```
      Pulse alarm   Upper door    Reset
        reset       guard ASU     EM-stop
       M05.11       I02.05       M14.04                                          M14.11
1210 ---] [---+---] [-----] [-----------------------------------------------------( )---  Reset upper door guard
                   M.B098                                                                  ASU
      Reset upper
       door ASU
       M14.11
     ---] [---+

      Low level   Outputpulse  Outputpulse  Outputpulse   Drying      Reset      End of
      tank perox.  startseq.     stop       inching     fullfilled   EM-stop    circ. seq.
       C0004.0     M02.06      M02.11       M02.17      M11.17      M14.04     T0006.0      I006
1211 ---]/[-----]/[-----]/[-----]/[-----] [-----] [-----]/[-----------------------(TRN)---  Sequencer for circulation
      900-910                                                     5m00s0                      of hydrogen peroxide
                                                                  5m01s0

      Aux.output  Sensorcheck
       startseq.   perox. bath
       M14.00       D042                                                           M04.13
1212 ---] [----[DOF]-----------------------------------------------------------------( )---  Sensor check
                   15s00

      Peroxide    Level check
       bath level   peroxide
       I05.16       D051                                                           M07.04
1213 ---] [----[DOF]-----------------------------------------------------------------( )---  Level check peroxide bath
      A303         3s0                                                                        during production

       Alarm       Main motor
       reset       high speed
       PI0.00      O14.01                                                         M11.00
1214 ---] [-----]/[-----------------------------------------------------------------(U)---  Levelfault in hydrogen
      P.S033H      K002                                                                       peroxidebath

      Peroxide     Sensor
       bath level   check
       I05.16      M04.13                                                          M11.00
1215 ---] [-----]/[-----------------------------------------------------------------(L)---  Levelfault in hydrogen
      A303                                                                                    peroxidebath

      Level check  Level check  Aux.output
       perox.bath   perox. bath   startseq.
       T0001.3      M07.04       M14.00
     ---] [-----]/[-----] [---+
      16s00
      18s20
```

1216 Low level tank perox. C0004.0 900-910]/[Machine in position 7 M00.07]/[Machine in position3-7 M00.12 [Venting as. chamber M04.04]/[Perox. pump stopped M07.02]/[Memory lev. too high M07.11]/[Spray fault M10.15]/[Wrong pos. airinletval M10.16]/[( ) O14.10 K011 — Hydrogen peroxide pump

1217 Outputpulse startseq. M02.06]/[Outputpulse stop M02.11]/[Outputpulse inching M02.17]/[Reset EM-stop M14.04 [Main motor high speed O14.01 K002]/[Peroxide pump on D028 [DON] 1m00s0]/[Circ. time by running T0006.2 3m30s0 5m00s0]/[Hydr.perox. pump O14.10 K011 [( ) O14.10 K011 — Hydrogen peroxide pump

Aux.output startseq. M14.00 [Circ. time by stop T0006.1 0s0 1m00s0 [

Drying fullfilled M11.17]/[Reset EM-stop M14.04 [

1218 Machine in position3-7 M00.12 [Aux.output drivemotor M12.01 [Aux.output startseq. M14.00]/[Inching mainmotor P10.03 P.S002]/[Bottomcover perox.bath I05.13 M.B048:1-4 [( ) O21.00 M.Y005 — Peroxide bath draining

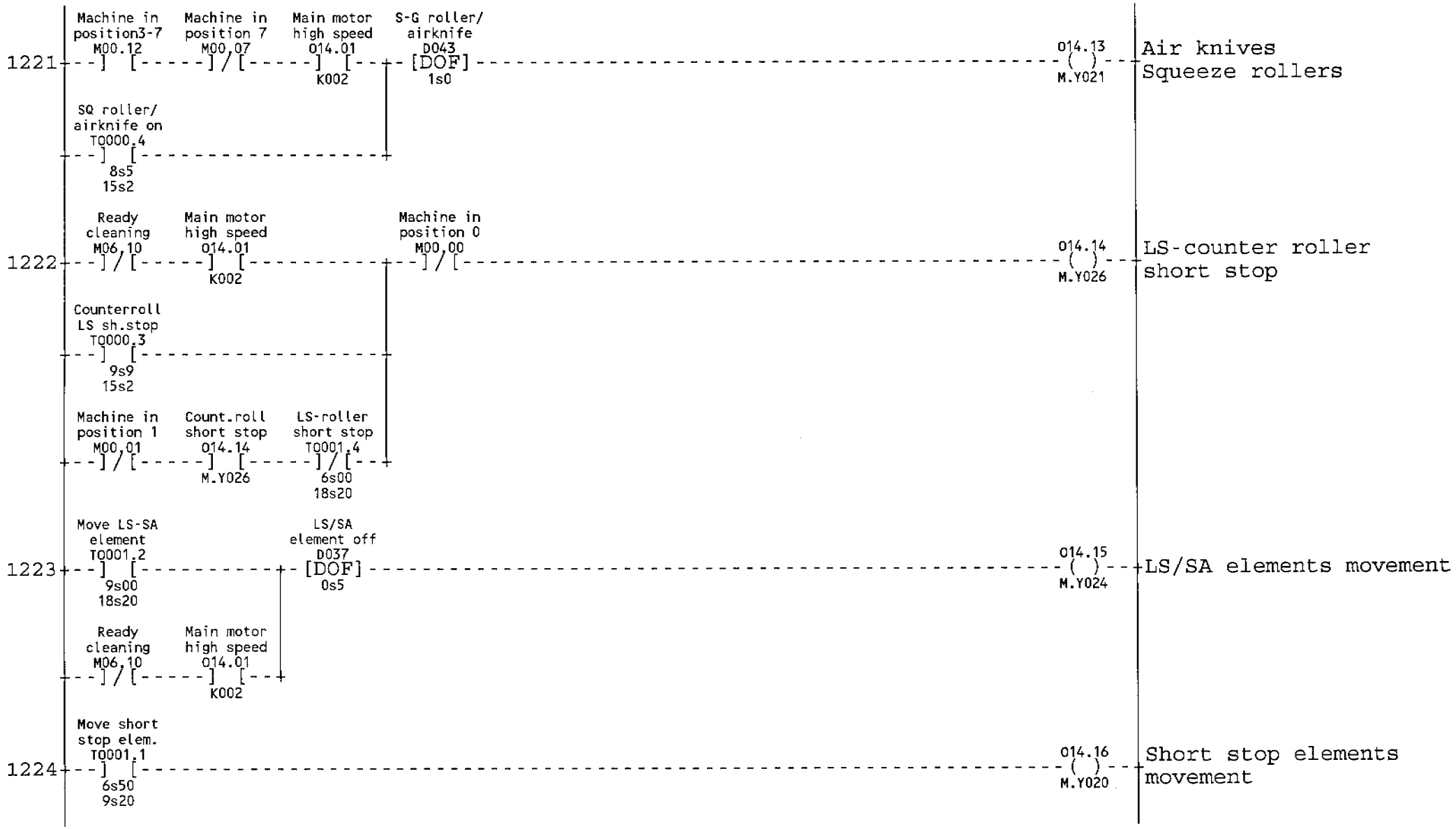
Aux.output startseq. M14.00 [

Hydr.perox. pump O14.10 K011 [

High level supervision M07.06 [

1219
Aux.output startseq. M14.00]/[
Hydr.perox. pump O14.10 [K011
Peroxide bath level I05.16] [A303
Aux.output startseq. M14.00] [
Perox.bath fill,drain O20.02] [M.Y006
End start sequence T0000.1] [10s0 15s2
Machine in position3-7 M00.12] [
Aux.output drivemotor M12.01] [
Aux.output startseq. M14.00]/[
High level supervision M07.06] [
O20.02 ( ) M.Y006
Peroxide bath filling,draining

1220
Top filling time T0006.3]/[35s0 40s0
Machine in position 0 M00.00]/[
Ready cleaning M06.10]/[
End of start seq. T0001.0]/[0s00 18s00
Aux.output startseq. M14.00]/[
High level supervision M07.06] [
O21.01 ( ) M.Y018
Peroxide bath top filling


1221
Machine in position3-7 M00.12
Machine in position 7 M00.07
Main motor high speed O14.01 K002
S-G roller/ airknife D043 [DOF] 1s0
O14.13 M.Y021
Air knives Squeeze rollers
SQ roller/ airknife on T0000.4 8s5 15s2
1222
Ready cleaning M06.10
Main motor high speed O14.01 K002
Machine in position 0 M00.00
O14.14 M.Y026
LS-counter roller short stop
Counterroll LS sh.stop T0000.3 9s9 15s2
Machine in position 1 M00.01
Count.roll short stop O14.14 M.Y026
LS-roller short stop T0001.4 6s00 18s20
1223
Move LS-SA element T0001.2 9s00 18s20
LS/SA element off D037 [DOF] 0s5
O14.15 M.Y024
LS/SA elements movement
Ready cleaning M06.10
Main motor high speed O14.01 K002
1224
Move short stop elem. T0001.1 6s50 9s20
O14.16 M.Y020
Short stop elements movement

1225	Alarm reset PI0.00 P.S033H] [	Main motor high speed O14.01 K002]/[	M11.03 (U)	Squeeze rollers in wrong position
1226	Alarm reset PI0.00 P.S033H] [	Main motor high speed O14.01 K002]/[	M11.15 (U)	Airknives wrong position
1227	Squeeze rollers pos I05.00 M.B046] [	Sensor check M04.13]/[	M11.03 (L)	Squeeze rollers in wrong position
	Squeeze rollers pos I05.00 M.B046]/[	Counterroll LS sh.stop T0000.3 9s9 15s2] [		
1228	Airknives position I05.01 M.B047] [	Sensor check M04.13]/[	M11.15 (L)	Airknives wrong position
	Airknives position I05.01 M.B047]/[	Counterroll LS sh.stop T0000.3 9s9 15s2] [		
1229	Alarm reset PI0.00 P.S033H] [	Step Up PI0.05 P.S030H]/[	M04.15 (U)	Monitor temperature peroxide bath, peroxide
1230	Peroxide bath temp. I06.15 A213]/[	Product valve on T0000.5 9s5 15s2] [	M04.15 (L)	Monitor temperature peroxide bath, peroxide

```
      Machine in
      position 0
        M00.00
1231 ---]  [---+------------------
```

1234
- Machine in position3-7 M00.12]
- Air inlet valve O20.07 [M.Y044
- Short stop on M06.07]/[
- Main motor high speed O14.01]/[K002
- Preheating I O15.00 [K018
- Sterile air valve (B) O20.04]/[M.Y008
- Machine in position2-7 M00.11]/[
- Edgewicking short stop TQ003.3 [1m00s 16m00s
- O21.02 ( ) M.Y071

Suction valve aseptic chamber

1235
- Machine in position 5 M00.05]
- Machine in position 6 M00.06]
- Short stop on M06.07]/[
- Machine in position5-7 M00.14]/[
- Drying fullfilled M11.17 [
- Inching mainmotor PI0.03 [P.S002
- M07.03 ( )

Sond select high/low level tank peroxide

1236
- High level tank perox. I04.06] A305
- Sond select tank perox M07.03]/[
- Low level perox. tank I04.16] A306
- Sond select tank perox M07.03 [
- M07.10 ( )

Level in peroxide tank

1237 Hydr.perox. pump O14.10 K011] [— Filling peroxide D049 [DOF] 1m00s0 — M07.01 ( ) — Refilling peroxide

Mechanical brake on TQ012.2 0s00 0s10] [

1238 Low level tank perox M07.00] / [— Peroxide level OK M07.10] / [— Refilling peroxide M07.01] / [— Memory lev. too high M07.11] / [— Preheating I O15.00 K018] [— Delay disp. 8 seconds CQ016.2 8-965] [— O20.16 ( ) M.Y038 — Refilling hydrogen peroxide tank

Perox. pump stopped M07.02] [

Low level tank perox. CQ004.0 900-910] [

1239 Peroxide level OK M07.10] [— M07.00 (U) — Alarm low level tank per. or too long refilling

Alarm reset PI0.00 P.S033H] [

Hydr.perox. pump O14.10 K011] [

1240 Peroxide level OK M07.10] / [— Refilling per. tank O20.16 M.Y038] [— Alarm tank peroxide D046 [DON] 20s0 — Low level tank perox. CQ004.0 900-910] / [— M07.00 (L) — Alarm low level tank per. or too long refilling

1241 — Low level tank perox M07.00] [— Machine in position3-7 M00.12] [— Flash 1 Hz M37.00] [— Low level tank perox. C0004.0]/[900-910 — C004 (CTU) — Max runtime with low level in peroxide tank

Low level tank perox. C0004.1] [1-905

1242 — Peroxide level OK M07.10] [— C004 (CTR) — Max runtime with low level in peroxide tank

1243 — High level tank perox. I04.06]/[A305 — Low level perox. tank I04.16]/[A306 — Sensor check M04.13]/[— M07.02 (L) — Peroxide pump stopped during peroxide change

1244 — High level tank perox. I04.06] [A305 — Low level perox. tank I04.16] [A306 — M07.02 (U) — Peroxide pump stopped during peroxide change

1245 — Peroxide level OK M07.10] [— Hydr.perox. pump O14.10] [K011 — Inching mainmotor P10.03]/[P.S002 — Sensorcheck perox. tank T0006.4] [28s0 29s0 — M07.05 (L) — Level too high in peroxide tank

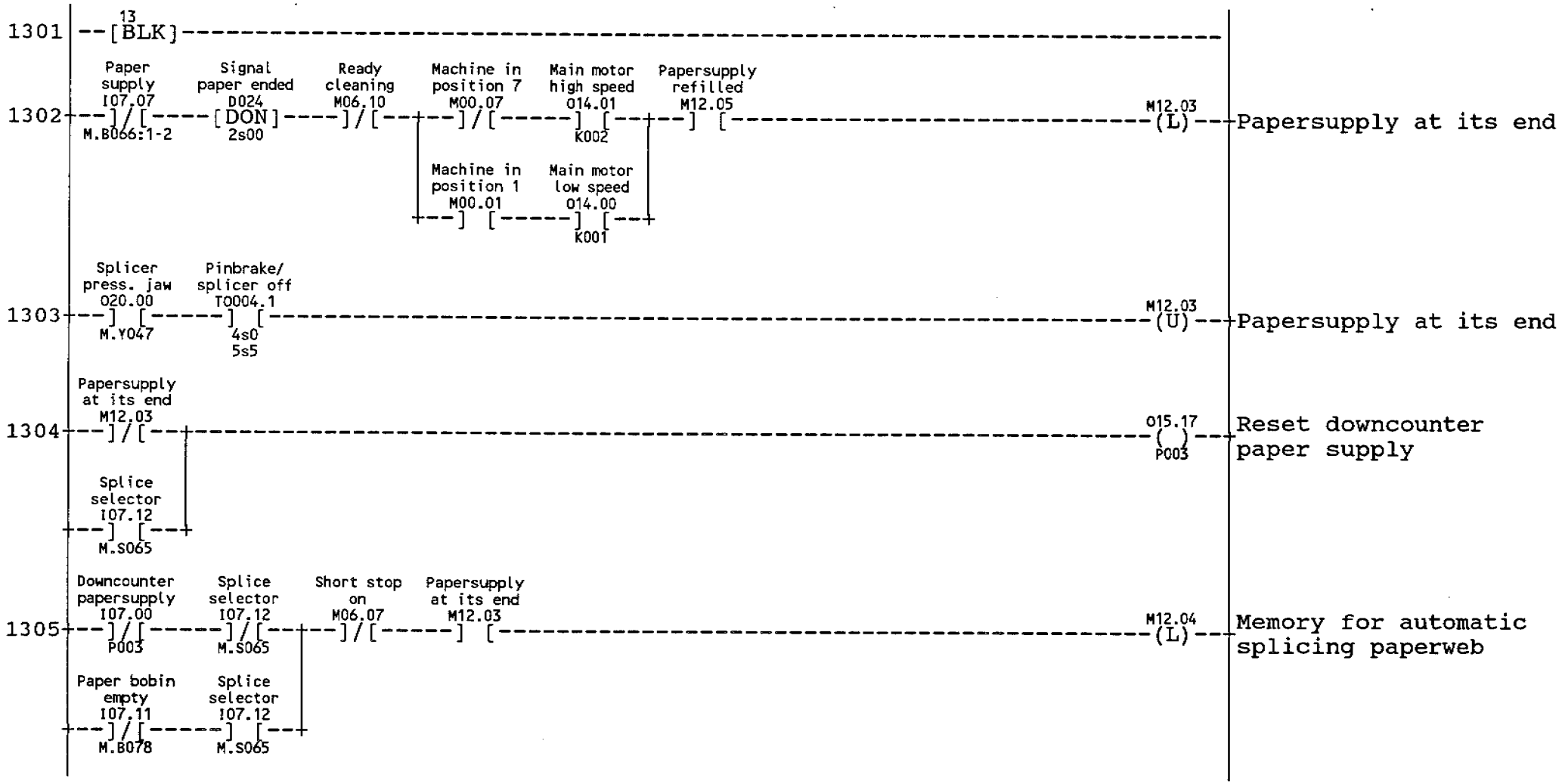
1246 — High level tank perox. I04.06]/[A305 — Delay low level tank D056 [DON] 0s5 — M07.06 (U) — High level supervision in peroxide tank

1247 — Level too high M07.05] [— High level tank perox. I04.06] [A305 — M07.06 (L) — High level supervision in peroxide tank

1248 — Level too high M07.05]/[— Alarm reset pulse M10.10 [P+] — Alarm reset pulse time D059 [DOF] 0s5 — P00.00 ( ) — Alarm panel reset

```
     Aux.output   Check low   High level   Low level
     startseq.    level tank  supervision  perox.tank
     M14.00       D058        M07.06       D057
1249 ---]/[----   [DON]  ----]/[----  [DON]  ----------------------------------------  M07.05 (U)---+ Level too high in
                  25s0                      2s0                                                       | peroxide tank
     Level too
       high
     M07.05
1250 ---]  [-------------------------------------------------------------------------  M07.11 (L)---+ Memory level too high
                                                                                                     | in peroxide tank
     Level too    Alarm
       high       reset
     M07.05       P10.00
1251 ---]/[-----]  [-------------------------------------------------------------------  M07.11 (U)---+ Memory level too high
                  P.S033H                                                                            | in peroxide tank
```

AUTOMATIC SPLICING UNIT



1306 ---] [--- Sequence ASU T0004.0 / 5s5 / 5s7 ; Machine in position 0 M00.00 ---] [--- ---------- M12.04 (U) --- Memory for automatic splicing paperweb

1307 ---]/[--- Splicer ASU temperature I06.07 / A208 ; ---] [--- Automatic splice M12.04 ; ---] [--- Papersupply at its end M12.03 ; ---]/[--- Splicer brake ASU O20.12 / M.Y046 ; ---]/[--- Pinbrake/ splicer off T0004.1 / 4s0 / 5s5 ---------- M15.10 ( ) --- Malfunction of paper splicing

---]/[--- Paper for splicer I07.02 / M.B063:1-2

---]/[--- Monitors doors ASU I05.14 / M.B099:1-2

---]/[--- Cover in place ASU I07.10 / M.B077 ; ---] [--- Splice selector I07.12 / M.S065

1308
Automatic splice M12.04] [Malfunction papersplice M15.10]/[Machine in position 7 M00.07]/[Main motor high speed O14.01 K002] [Monitors doors ASU I05.14 M.B099:1-2] [Splicer ASU temperature I06.07 A208] [Resetsafety monitors M14.05] [Reset upper door ASU M14.11] [M12.07 (L)
Machine in position 1 M00.01] [Main motor low speed O14.00 K001] [
Paper for splicer I07.02 M.B063:1-2] [Manual splicing I07.04 M.S060] [
Memory for start of splicing paperweb

1309
Sequence ASU T0004.0 5s5 5s7] [M12.07 (U)
Machine in position 0 M00.00] [
Memory for start of splicing paperweb

1310
Creasewheel position I07.01 M.B062] [Splicer brake ASU O20.12 M.Y046] [Delay splice ASU T0004.3 0s3 3s0] [O20.00 (L) M.Y047
Splicer pressure jaw ASU

1311
Outputpulse pos. ASU M02.13] [Memory papersplice M12.07] [O20.12 (L) M.Y046
Manual splicing I07.04 M.S060]/[Manual splice on D009 2s0 [DON] Splice selector I07.12 M.S065] [
Splicer brake ASU

1312 Pinbrake/ splicer off T0004.1 ---] [--- 4s0 5s5 ---(U)--- O20.12 M.Y046 --- Splicer brake ASU

1313 Pinbrake/ splicer off T0004.1 ---] [--- 4s0 5s5 ---(U)--- O20.00 M.Y047 --- Splicer pressure jaw ASU

Resetsafety monitors M14.05 ---]/[--- Memory papersplice M12.07 ---] [--- Splicer press. jaw O20.00 ---]/[--- M.Y047

Monitors doors ASU I05.14 ---]/[--- M.B099:1-2

Reset upper door ASU M14.11 ---]/[---

1314 Splicer brake ASU O20.12 ---] [--- M.Y046 ---]/[--- Sequence ASU T0004.0 5s5 5s7 ---(TRN)--- T004 --- Sequencer for paper splicing

End of splice seq. T0004.2 ---] [--- 3s0 5s5

```
      Rotationmon   Main motor   Bend.roller   Splicer     Pinbrake/
       paperweb     high speed      power      press. jaw   splicer off
       M15.12        O14.01       O14.04       O020.00      T0004.1                                  M12.06
1315 --]/[----------]  [------]  [------]/[------]/[-------------------------------------------( )---Auxilliary memory
                     |   K002     K007-K008    M.Y047       4s0                                      ASU-motor on
                     |                                     5s5
      Ready   Inching |
      cleaning condition
      M06.10   M01.02 |
     ---]  [------]  [--+
      Memory
      papersplice
      M12.07
     ---]  [-------------------+
      Lower   Aux.memory  Splicer
      slacksupply ASU-motor brake ASU
      I07.03   M12.06     O20.12                                                                   O16.07
1316 --]/[------]  [------]/[-------------------------------------------------------------------( )---ASU-motor high speed
      M.B064              M.Y046                                                                   A003
      Web     Main motor                      ASU-motor
      feeding high speed                      high speed
      I07.13  O14.01                          O16.07                                               O16.06
1317 --]  [------]/[-------------------+--]/[-------------------------------------------------( )---ASU-motor low speed
      M.S066  K002                     |      A003                                                 A003
      Lower   Main motor               |
      slacksupply low speed            |
      I07.03  O14.00                   |
     --]/[------]  [-------------------+
      M.B064  K001                     |
      Lower   Prepatation  Monitors    |  Machine in
      slacksupply switch   doors ASU   |  position 0
      I07.03  I02.16       I05.14      |  M00.00
     --]/[------]/[------]  [------]  [---+
      M.B064  k128         M.B099:1-2  |
      Machine in  Aux.memory           |
      design      ASU-motor            |
      M11.11      M12.06               |
     --]  [--+--]  [-------------------+
             |
      Memory |
      papersplice |
      M12.07 |
     --]  [--+
```

```
1318 Aux.memory ASU-motor M12.06 --] [-----] / [Magazine empty ASU M16.00 ----------------------------------------------------------------( ) O20.13 M.Y045 --- Drive unit pressure roll ASU

1319 Memory papersplice M12.07 --] / [----[DON] Paper supply ok D014 2m00s ----------------------------------------------------------------(L) M12.05 --- Papersupply refilled after paperwebsplicing

1320 Pinbrake/ splicer off T0004.1 --] [4s0 5s5 ----------------------------------------------------------------(U) M12.05 --- Papersupply refilled after paperwebsplicing

1321 Main motor low speed O14.00 --] / [K001 -----] / [Main motor high speed O14.01 K002 -----] [Alarm reset P10.00 P.S033H ----------------------------------------------------------------(U) M15.12 --- Rotation monitor paperwebfault

1322 Ready cleaning M06.10 --] / [K002 -----] [Main motor high speed O14.01 ----[DON] Rotation monitor D007 0s70 ----] / [Outputpulse rot.monitor M02.07 ----[DON] Rotation monitor D008 0s70 ----------------------------------(L) M15.12 --- Rotation monitor paperwebfault

1323 External cleaning M06.17 --] [K001 -----] [Main motor low speed O14.00 -----] [Outputpulse rot.monitor M02.07 ----------------------------------------------------------------(L) M15.12 --- Rotation monitor paperwebfault

1324 Upper slacksupply I07.05 --] [M.B067 ----------------------------------------------------------------(L) M16.00 --- Magazine empty ASU

1325 Lower slacksupply I07.03 --] [M.B064 ----------------------------------------------------------------(U) M16.00 --- Magazine empty ASU
```

```
      | Monitors   Preparing                                                                  |
      | doors ASU  splice ASU                                                                 |
      |   I05.14     D052                                                          M15.07     | Door monitor ASU
1326  |---]/[-----[DON]-------------------------------------------------------------( )---   | activated too long
      | M.B099:1-2  2m00s0                                                                    |

      |  Door      Malfunction  Rotationmon   Magazine                                        |
      | monitor ASU papersplice  paperweb    empty ASU                                        |
      |   M15.07     M15.10       M15.12       M16.00                                M16.01   |
1327  |---]/[-----]/[-----]/[-----]/[-----------------------------------------------( )---    | ASU ready
```

DRIVEMOTOR AND PRODUCTION

1401 [BLK] 14

1402
- Machine in position 1 M00.01]
- Inching condition M01.02]
- Inching mainmotor PI0.03 P.S002]
- Selector switch PI0.07 P.S007]
- Machine in position 7 M00.07]
- Tubesealing going on M12.00]
- End start sequence T0000.1 10s0 15s2]
- End start sequence T0000.1 10s0 15s2]
- Inching mainmotor PI0.03 P.S002] /
- Steambarr. valve (C) O20.03 M.Y007]
- [DOF] Stop main motor D017 8s00
- Machine in position3-7 M00.12]
- Demand III short stop M06.06]
- Mechanical/ DC-brake T0012.0 0s00 10s00] /
- ( ) M12.01 — Auxiliary output drivemotor

1403
- Resetsafety monitors M14.05]
- Reset overl.prot. M14.07]
- Main motor low speed O14.00 K001] /
- Overload jawsystem M04.14] /
- Aux.output drivemotor M12.01]
- Rotationmon paperweb M15.12] /
- Magazine empty ASU M16.00] /
- ( ) O14.01 K002 — Main motor high speed

1404
- Main motor high speed O14.01 K002]
- [DOF] Mechanical brake D029 10s0
- Main motor high speed O14.01 K002] /
- (TRN) T012 — Sequencer for mechanical and DC-brake main motor

1405 Mechanical brake on T0012.2]-[0s00 0s10 — Main motor low speed O14.00]-[K001 — Main motor high speed O14.01]-[K002 — O14.02 ( ) K004 — Mechanical brake

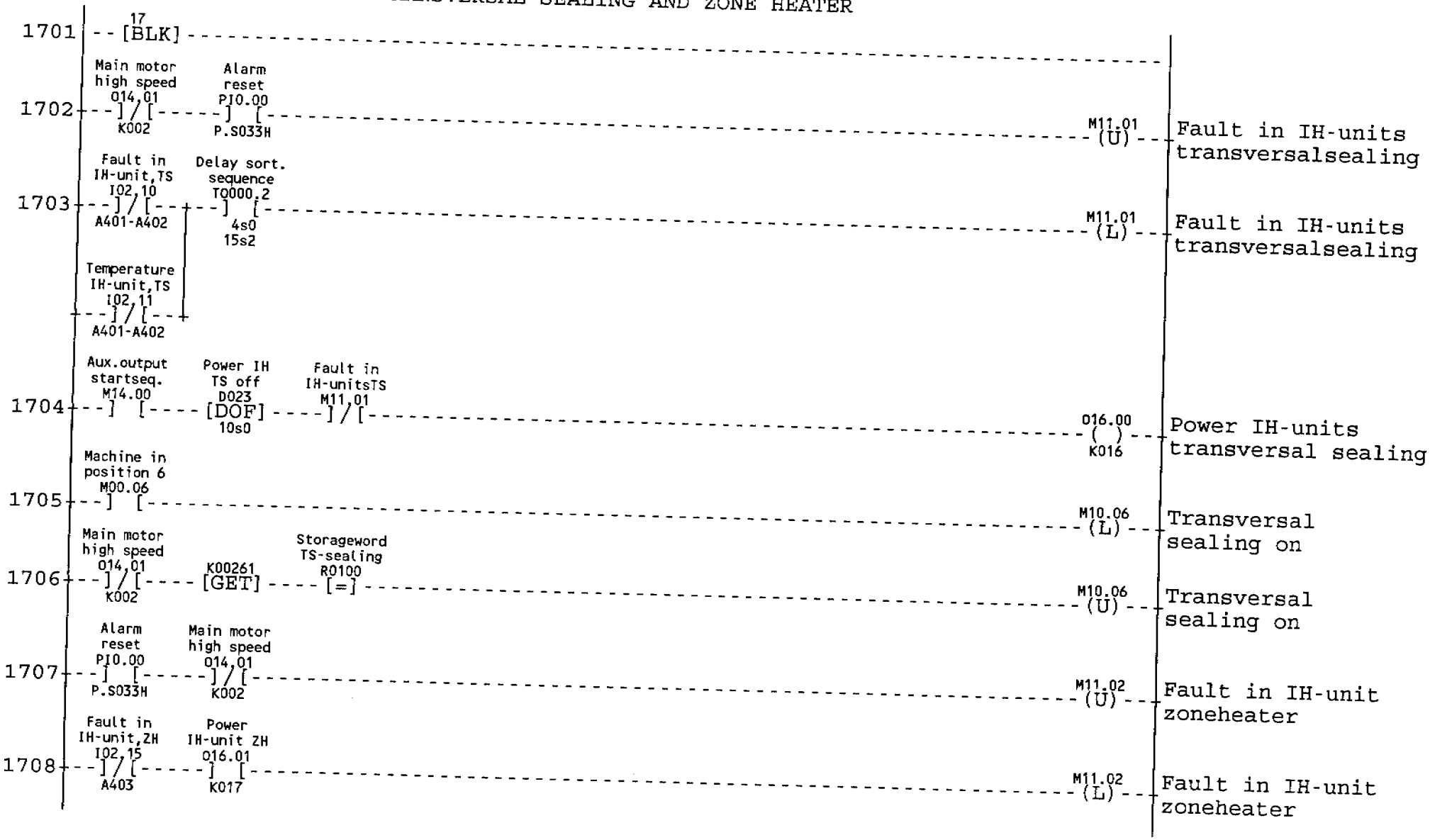
1406 Air inlet valve O20.07]/[M.Y044 — End start sequence T0000.1]-[10s0 15s2 — Delay steam valve off D055 [DOF] 5s0 — Steambarr. valve off M17.00 [P-] — Main motor high speed O14.01]-[K002 — O20.03 (U) M.Y007 — Steambarrier valve (C)

1407 End start sequence T0000.1]-[10s0 15s2 — Main motor high speed O14.01]-[K002 — Inching mainmotor PI0.03]/[P.S002 — C-valve on D040 [DON] 5s0 — Key signal steambarr. M07.17]-[— Ready for CIP O17.07]-[K111 — Proc.signal steambarr. M07.12]-[— O20.03 (L) M.Y007 — Steambarrier valve (C)

1408	Productpipe position I05.02 M.B051					O20.03 (U) M.Y007	Steambarrier valve (C)
1409	Outputpulse pack.dump. M02.04	Main motor high speed O14.01 K002	Steambarr. valve (C) O20.03 M.Y007	Inching mainmotor PI0.03 P.S002	Delay filling on C0008.0 28-30	C008 (CTU)	Sequencer delay of filling on
1410	Short stop on M06.07	Main motor high speed O14.01 K002				C008 (CTR)	Sequencer delay of filling on
1411	Machine in position 6 M00.06	Product valve on T0000.5 9s5 15s2	B-valve position I05.03 M.B053			O20.01 ( ) M.Y009	Product valve (A)
	Clean.thr. prod.valve I03.05 X1.362	Ready for CIP O17.07 K111					
1412	Machine in position 6 M00.06	Drop chute FFU O14.07 M.Y027	Scan shiftreg. S00.05 115-124 315-324			O16.11 ( ) P005-6,K051	Package counter
1413	Creasewheel position I07.01 M.B062	Machine in position 0 M00.00				O16.12 ( ) K050	Total paper counter
1414	Synch. mach. speed M04.00	Scan shiftreg. S00.05 115-124 315-324	Pulse package M04.02 [P-]			C009 (CTU)	Package counter machine speed

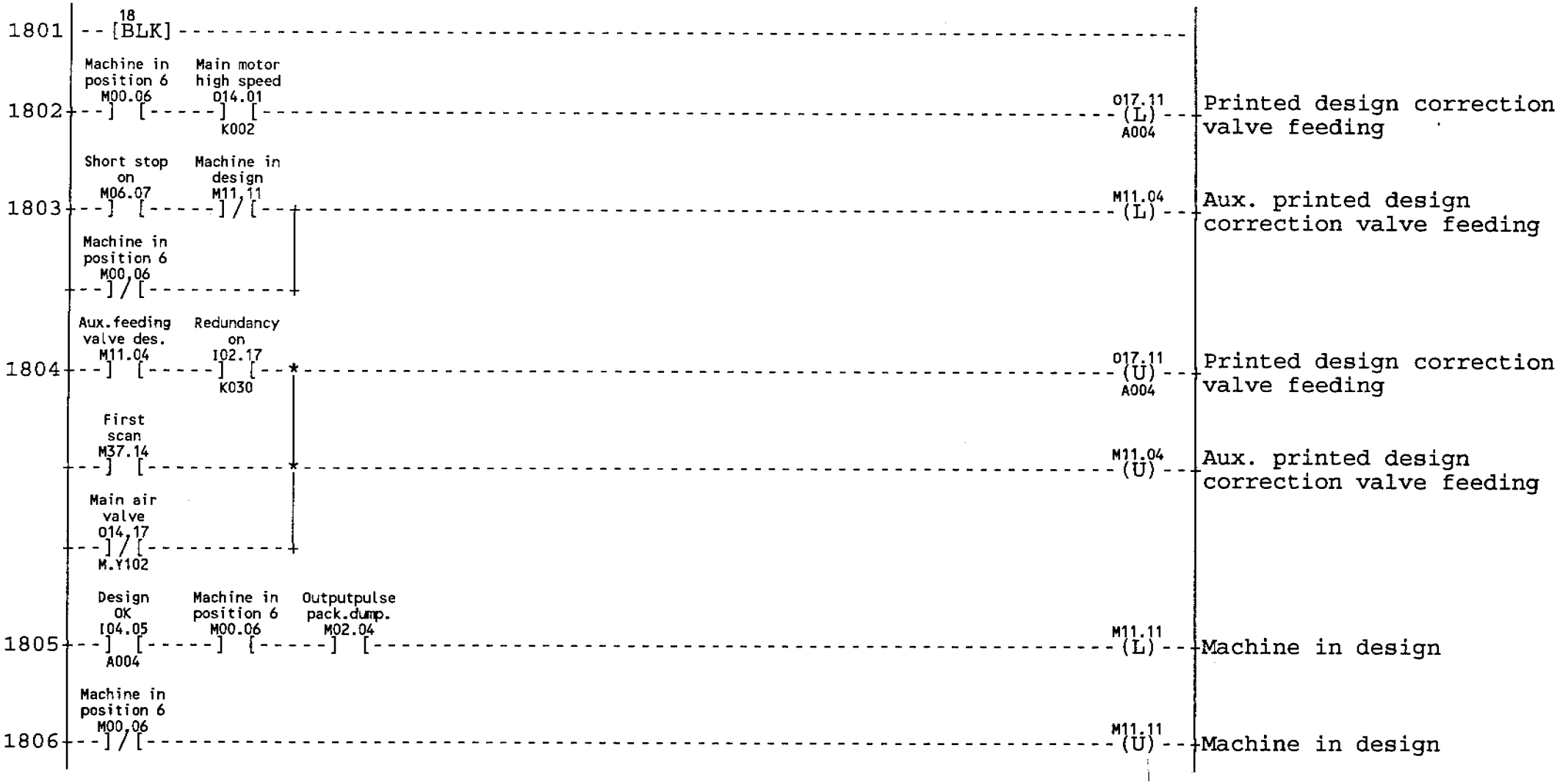
```
     Machine in   Synch.       Scan        Pulse
     position 6   mach. speed  shiftreg.   package
       M00.06     M04.00       S00.05      M04.03
1415 --] [-----]/[-----] [-----[P-]-------------------------------------(L)---Synchronization
                              115-124                                         machine speed
                              315-324

     End package
       counter
       C0009.0
1416 --] [--+-----------------------------------------------------------(U)---Synchronization
       104-105 |                                                               machine speed
               |
     Machine in |
       position 6 |
       M00.06     |
     --]/[--+

     End package  End of
       counter    speed seq.
       C0009.0    T0045.0
1417 --] [-----] [-----------------------------------------------------(L)---Too high speed
       104-105     0s00
                  59s96

     Synch.
     mach. speed
       M04.00
1418 --] [-----------------------------------------------------------(TRN)--Speed timer
                                                                      T045

     Synch.
     mach. speed
       M04.00
1419 --]/[-----------------------------------------------------------(CTR)--Package counter machine
                                                                      C009    speed

       Alarm      Step
       reset      Up
       PI0.00     PI0.05
1420 --] [-----]/[-----------------------------------------------------(U)---Too high speed
       P.S033H    P.S030H
```

TRANSVERSAL SEALING AND ZONE HEATER



```
      Zone heater   Machine in   Fault in    Preheating
        on          position5-7  IH-unit ZH  I
      I02.14        M00.14       M11.02      O15.00
1709---]  [-----]  [-----]/[-----]  [-----------------------------------------------------------(  )---+Power IH-unit
        S007                                 K018                                          O16.01      |zone heater
                                                                                           K017
      Machine in    Main motor   Power
        design      high speed   IH-unit ZH
      M11.11        O14.01       O16.01
1710---]  [-----]  [-----]  [-----------------------------------------------------------(  )---+Zoneheater on
                    K002         K017                                                     O16.05
                                                                                           A006
      Jaw system    Door guards
        overload      tower
      I02.02        I02.04
1711---]/[-----]  [-----------------------------------------------------------------------(L)---+Overload jawsystem
        M.B016      M.B070:1-4                                                           M04.14
      Mechanical    Alarm
        brake       reset
      O14.02        P10.00
1712---]/[-----]  [-----------------------------------------------------------------------(U)---+Overload jawsystem
        K004        P.S033H                                                              M04.14
```

CORRECTION PRINTED DESIGN



1807]/[Design OK I04.05 A004 —] [Short stop on M06.07 — (U) M11.11 — Machine in design

1808] [First scan M37.14 — (U) M11.11 — Machine in design

1809] [Outputpulse pack.dump. M02.04 —] [Main motor high speed O14.01 K002 — (CTU) C000 — Printed design photocells out of function

1810]/[Machine in position5-7 M00.14 —] [Machine in position 7 M00.07 —] [Outputpulse print.des. M02.03 — (CTR) C000 — Printed design photocells out of function

1811] [Des.photoc. filling on C0000.0 9-10 —] [Des.photoc. production C0000.1 5-6 —] [Machine in design M11.11 — (L) M11.10 — Signal photocells printed design missing

1812] [Alarm reset PI0.00 P.S033H —]/[Mechanical brake O14.02 K004 — (U) M11.10 — Signal photocells printed design missing

1813]/[Design OK I04.05 A004 — [Outputpulse pack.dump. M02.04 — [Machine in position 6 M00.06 —]/[Design in wrong pos. C0001.0 10-11 — (CTU) C001 — Printed design in wrong position

1814] [Design OK I04.05 A004 — (CTR) C001 — Printed design in wrong position

1815 — (C) M16.10 — Memory for scan pulse

1816] [Scan pulse M16.10 — (CTU) C015 — Sequencer for transfering data to design contr.sys.

1817]/[DCS enable signal O15.12 A004 —]/[Delay after transfering C0015.0 33-43 — (CTR) C015 — Sequencer for transfering data to design contr.sys.

1818]/[DCS enable signal O15.12 A004 — [DCS clock signal O16.02 A004 — (C) O16.02 A004 — Design control system clock signal

1819]/[Scan pulse M16.10 — [Bits to transfer C0015.1 1-32 — (C) O16.02 A004 — Design control system clock signal

1820]/[DCS request volume val. I04.03 A004 — (L) O15.12 A004 — Design control system enable signal

] [Machine in position 4 M00.04 — [Step up conditions M01.01 — [Outputpulse step up M02.00 —]/[Main motor low speed O14.00 K001

1821	DCS enable signal O15.12 A004	Bits to transfer C0015.1 1-32	Repeat length R0112 [GET]	Production sector R0113 [GTH]	Repeat length R0110 (PUT)	R0111 (PTH)	Storage word for production sector
1822	First scan M37.14	K02450 [GET]	K00016 [GTH]		Repeat length R0112 (PUT)	R0113 (PTH)	Transferring word for production sector
1823	Scan pulse M16.10	Bits to transfer C0015.1 1-32	Data bits shifted M16.11			M37.17 ( )	Triggpulse for shiftregister
1824	Scan pulse M16.10	Bits to transfer C0015.1 1-32			Production sector R0111 (SHR)	R0110 (SHR)	Storege word for repeat length
1825	Scan pulse M16.10	Bits to transfer C0015.1 1-32	Triggpulse shiftregist M37.17			M16.11 (L)	Memory for data bits shifted
1826	Scan pulse M16.10	Bits to transfer C0015.1 1-32	Triggpulse shiftregist M37.17			M16.11 (U)	Memory for data bits shifted
1827	Bits to transfer C0015.1 1-32	Data bits shifted M16.11				O16.03 ( ) A004	Design control system data signal
1828	Delay after transfering C0015.0 33-43					O15.12 (U) A004	Design control system enable signal

DUMPING OF PACKAGES

```
1901 --[19 BLK]-------------------------------------------------------------------------------------------------------------
     Outputpulse
       stop
       M02.11        R0010        KFE7FH                                                                   R0010
1902 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (1-16)
     Outputpulse
       stop
       M02.11        R0011        K00FFH                                                                   R0011
1903 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (17-32)
     Outputpulse
       stop
       M02.11        R0012        KFCC0H                                                                   R0012
1904 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (33-48)
     Outputpulse
       stop
       M02.11        R0013        KFFFFH                                                                   R0013
1905 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (49-64)
     Machine in      Pulse
       design      precorr.out
       M11.11        M05.16       R0010       KFFF8H                                                        R0010
1906 --]  [-----[P+]---[GET]---[AND]-----------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (1-16)
     Design dev.   Machine in   Outputpulse
      too large    position 6   pack.dump.
      C0001.1       M00.06       M02.04       R0010       KFFFBH                                                R0010
1907 --]  [-----]  [-----]  [----[GET]---[AND]-------------------------------------------------------------(PUT)--+ Storage word shift reg.
       2-10                                                                                                        package dumping (1-16)
     Machine in    Machine in   Outputpulse
      position 6   position3-7  pack.dump.
       M00.06       M00.12       M02.04       R0010       KFFF7H                                                R0010
1908 --]/[-----]  [-----]  [----[GET]---[AND]-------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (1-16)
     Outputpulse
      PE-splice
       M02.14        R0011        KFFFFH                                                                   R0011
1909 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (17-32)
     Outputpulse
      PE-splice
       M02.14        R0012        KFE1FH                                                                   R0012
1910 --]  [----[GET]---[AND]-------------------------------------------------------------------------------(PUT)--+ Storage word shift reg.
                                                                                                                   package dumping (33-48)
```

1911	Outputpulse PE-splice M02.14	R0013 [GET]	KFFFFH [AND]				R0013 (PUT)	Storage word shift reg. package dumping (49-64)
1912	Outputpulse web splice M02.15	R0012 [GET]	KFF1FH [AND]				R0012 (PUT)	Storage word shift reg. package dumping (33-48)
1913	Outputpulse web splice M02.15	R0013 [GET]	KFFFFH [AND]				R0013 (PUT)	Storage word shift reg. package dumping (49-64)
1914	Outputpulse pack.dump. M02.04						M37.17 ( )	Triggpulse for shiftregister
1915	Outputpulse pack.dump. M02.04			R0013 (SHR)	R0012 (SHR)	R0011 (SHR)	R0010 (SHR)	Storage word shift reg. package dumping (1-16)
1916	Outputpulse tubesealing M02.10	K0000H [GET]				R0010 (PUT)	R0011 (PUT)	Storage word shift reg. package dumping (17-32)
1917	Outputpulse tubesealing M02.10	KFC00H [GET]					R0012 (PUT)	Storage word shift reg. package dumping (33-48)
1918	Outputpulse tubesealing M02.10	KFFFFH [GET]					R0013 (PUT)	Storage word shift reg. package dumping (49-64)
1919	Outputpulse pack.dump. M02.04						M10.13 (L)	Package ejection FFU activated
1920	Outputpulse pack.dump. M02.04	Triggpulse shiftregist M37.17]/[					M10.13 (U)	Package ejection FFU activated

```
      | Outputpulse                                                                  |
      | tubesealing                                                                  |
      | M02.10                                                                       |
1921  +---] [-----------+------------------------------------------------------ M10.13 (U) --- | Package ejection
      |                 |                                                                      | FFU activated
      | Stop delay      | Mechanical                                                           |
      | of FFU          | brake                                                                |
      | M11.05          | O14.02                                                               |
      +---]/[-----------]/[---+                                                                |
      |                 | K004                                                                 |
```

NO PRODUCTION ALLOWED

2001 -- [BLK] 20

2002 --] / [-----] / [-----] / [-----] / [-----] [-----] [-----] [-----] ( ) M06.04 — Demand I for short stop

Squeeze rollers pos M11,03 | Airknives position M11,15 | Mon. temp peroxide M04,15 | Low level tank perox. C0004,0 900-910 | Perox.bath temperature I06.02 A203 | Airknifes temperature I06.06 A207 | Strip break I07.17 M.B033

2003 --] [-----] / [-----] / [----- ( ) M06.04 — Demand I for short stop

Demand I short stop M06.04 | Levelfault perox.bath M11,00 | Temp. LS/SA out of lim M10,12

2004 --] [-----] [-----] / [-----] / [-----] [-----] / [-----] / [----- ( ) M06.05 — Demand II for short stop

Demand I short stop M06.04 | Hydraulunit high level I03.16 M.B045 | Lurication fault M10,07 | Max.runtime lubr.fault M15,00 | Alarmstatus in FFU M15.04 | Door monitor ASU M15,07 | Malfunction papersplice M15,10

Service switch I03.07 S005 | Hydraulunit low level I03.17 M.B045

2005 --] [-----] [-----] [-----] [----- ( ) M06.06 — Demand III for short stop

Selector switch PI0.07 P.S007 | Side change S00.02 100-277 | Demand II short stop M06.05

Selector switch PI0,07 P.S007 | Side change S00,02 100-277

Short stop I02.07 S003-M.S061 | Short stop PI0.12 P.S032H

2006 Machine in position short stop on

Outputpulse brake M02.02] [Demand III short stop M06.06] / [Machine in position 6 M00.06] [Memory to 0-position M07.13] / [M06.07 ( )

Short stop on M06.07] [Jump to pos. 3 M06.14] [Step down P10.06] [P.S031H End start sequence T0000.1] / [10s0 15s2

2007 Maximum time in short stop position

Short stop on M06.07] [T003 (TRN)

2008 Maximum time in short stop position

Aux.output startseq. M14.00] [Step Up P10.05] [P.S030H T003 (THD)

Sterilecond bypassed M10.01] [

FINAL FOLDING UNIT

2101 -- [21 BLK] ----------

2102 --] Safety monitors I02.01 M.B010-019 [-----] Manualflush FFU PI0.11 P.S020 [-----]/[Cond. ext. cleaning M06.11 ----------( ) O21.12 M.Y036 --- Manual flushing FFU

2103 --] Start FFU O15.13 G001 [-----] Alarmstatus in FFU M15.04 [-----] Power on O15.02 K005 [---------- ( ) M12.02 --- Speeddetermation motor FFU

2104 --] Speeddeterm FFU M12.02 [---- [DON] Rotation mon. FFU D018 0s3 ----]/[---- [DON] Rotation mon. FFU D019 0s70 ---------- (L) M15.11 --- Malfunction in rotation monitor FFU

2105 --]/[Mechanical brake O14.02 K004 [-----] Alarm reset PI0.00 P.S033H [-----]/[Inching FFU PI0.04 P.S009 ---------- (U) M15.11 --- Malfunction in rotation monitor FFU

2106 --] Infeed FFU right cong. I04.12 M.B044 [-----] Infeed FFU left cong. I10.00 M.B052 [---+---] Outputpulse FFU M02.05 [-----] Speeddeterm FFU M12.02 [---------- (L) M15.13 --- Malfunction in synchronization of FFU

--]/[Infeed FFU right cong. I04.12 M.B044 [-----]/[Infeed FFU left cong. I10.00 M.B052 ---+

2107 --] Infeed conv congestion I04.15 M.B058 [---- [DON] Conveyor infeed FFU D015 0s8 ----] Speeddeterm FFU M12.02 [---------- (L) M15.05 --- Malfunction conveyor infeed FFU

2108 --]/[Mechanical brake O14.02 K004 [-----] Alarm reset PI0.00 P.S033H [---------- (U) M15.13 --- Malfunction in synchronization of FFU

2109]/[Mechanical brake O14.02 K004 — [Alarm reset PI0.00 P.S033H — (U) M15.05 — Malfunction conveyor infeed FFU

2110] [Speeddeterm FFU M12.02 — [DON] Overload in FFU D025 0s30 —]/[Outputpulse over.FFU M02.16 — [DON] Overload in FFU D026 0s40 —] Resetsafety monitors M14.05 — [Reset overl.prot. M14.07 — (L) M15.14 — Overload in FFU

2111]/[Mechanical brake O14.02 K004 — [Alarm reset PI0.00 P.S033H —]/[Inching FFU PI0.04 P.S009 — (U) M15.14 — Overload in FFU

2112] [Package in outfeed FFU M16.04 — [DON] Malfunction outfeed FFU D106 0s500 — (L) M15.15 — Malfunction in outfeeding of FFU

] [Outfeed FFU congestion I04.10 M.B043 — [Speeddeterm FFU M12.02 — [DON] Malfunction outfeed FFU D041 1s00

2113]/[Mechanical brake O14.02 K004 — [Alarm reset PI0.00 P.S033H — (U) M15.15 — Malfunction in outfeeding of FFU

2114] [Ext.package supervision I04.14 M.B090:1-2 — [DON] Ext.package supervision D093 1s0 — (L) M15.03 — Malfunction in external package supervision

2115] [Alarm reset PI0.00 P.S033H — (U) M15.03 — Malfunction in external package supervision

2116]/[Ext.package supervision M15.03 —]/[Malfunction conv. FFU M15.05 —]/[Malfunction rot.mon.FFU M15.11 —]/[Malfunction synch. FFU M15.13 —]/[Overload in FFU M15.14 —]/[Malfunction outfeed FFU M15.15 —]/[— ( ) M15.04 — Alarmstatus in FFU

2117 Machine in position 6 M00.06] [Short stop on M06.07]/[Aux.output startseq. M14.00] [Stop motor FFU D012 [DOF] 10s0] / [Ready cleaning M06.10] / [Alarmstatus in FFU M15.04] [M11.05 ( ) — Stop delay of FFU

Aux.output startseq. M14.00] [

FFU short emptying T0012.4] [0s00 2s00

Machine in position 1 M00.01] [Main motor low speed O14.00] [K001 [DOF] D103 2s0

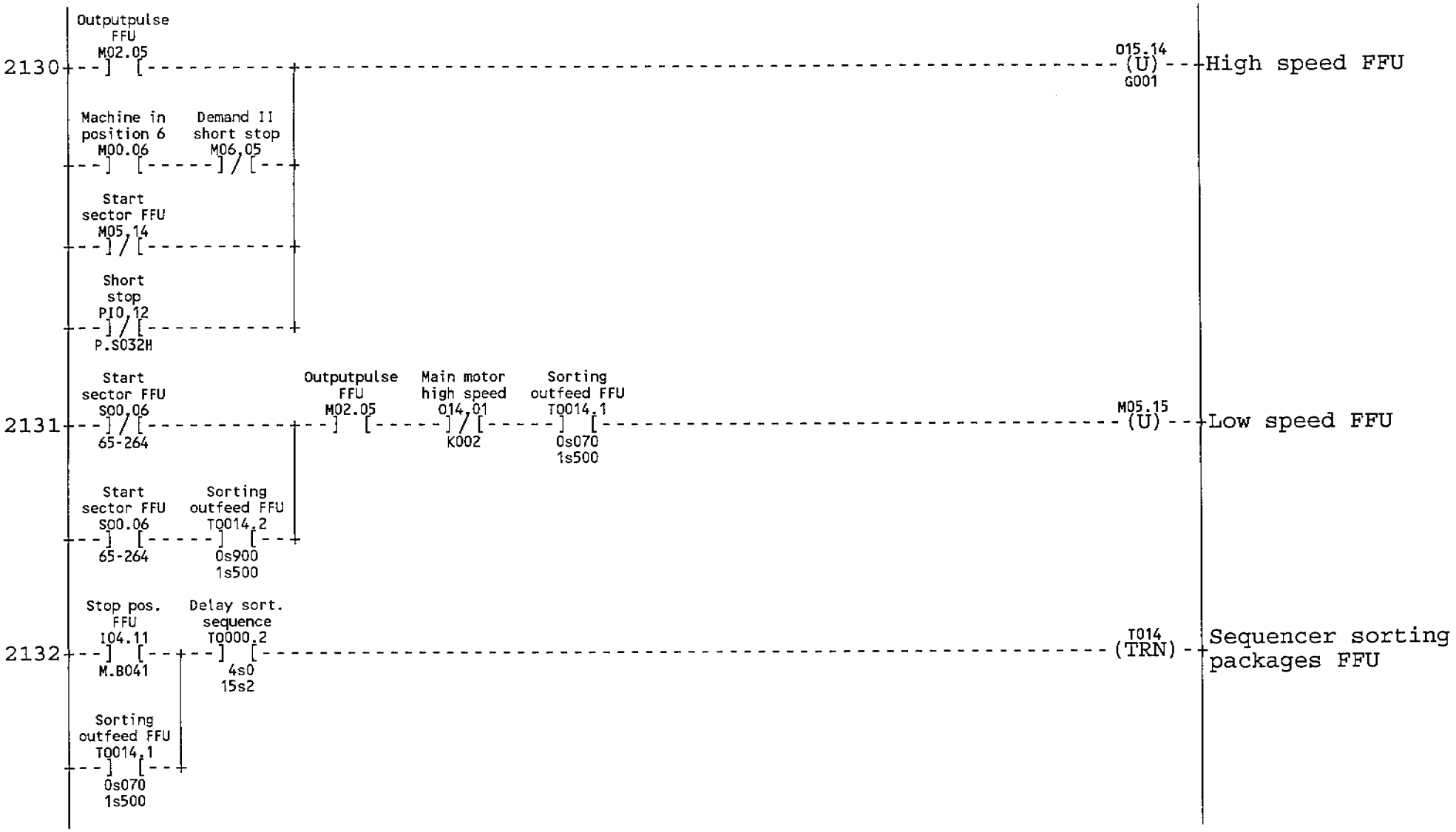
2118 Speeddeterm FFU M12.02] [Power off FFU D034 [DOF] 2s5 * Resetsafety monitors M14.05] [Reset overl.prot. M14.07] [Alarmstatus in FFU M15.04] [Machine in position 0 M00.00] / [O14.03 ( ) K006 — FFU motor

Aux.output startseq. M14.00] [* Alarmstatus in FFU M15.04] / [K00025 [GET] DV034 (PUT) 2s5 — Power off Final Folder Unit

2119 Inching mainmotor P10.03] / [P.S002 Mechanical/ DC-brake T0012.0] / [0s00 10s00 Main motor low speed O14.00] / [K001 M05.01 ( ) — Enable on calculation FFU position

2120 Synchroniz. sector FFU S00.09] [50-150 250-350 Synchroniz. pulse FFU M05.05 [P+] M05.12 ( ) — Synchronization sector FFU

```
     Synchroniz.                                                                                                  Deviation
      sector FFU                                                                                                  FFU ahead
       M05.12        K00000                                                                                         R0202          R0203
2121 --]  [----  [GET] ------------------------------------------------------------------------------------------ (PUT) --- (PUT) --  Deviation FFU later
                                                                                                                                     than filling machine

     Enable on   Synchroniz.   Position                          Position    Position    Position
      calcul.FFU  sector FFU    of FFU                           fillingmach fillingmach  of FFU
       M05.01      M05.12       R0201        K00300              R0200       R0200       R0201        K00002                R0202
2122 --]  [-----]  [----  [GET] ----  [>] -----  [<] ----  [GET] ----  [-] -----  [:] ---------- (PUT) --  Deviation FFU
                                                                                                                                     ahead of filling machine

     Enable on   Outputpulse   Synchroniz.   Position
      calcul.FFU   FFU          sector FFU    of FFU
       M05.01      M02.05       S00.09        R0201        K00300      K00010                                R0203
2123 --]  [-----]  [-----]  [----  [GET] ----  [<] -----  [:] ------------------------------ (PUT) --  Deviation FFU later
                                 50-150                                                                              than filling machine
                                 250-350

     Synchroniz.   Switch for   Deviation    Short
      sector FFU    high speed   FFU ahead    stop
       M05.12        R0204       R0202       P10.12                                                               R0204
2124 --]  [----  [GET] ----  [+] -----]  [-------------------------------------------------------------- (PUT) --  Switch for high speed
                                            P.S032H                                                                  of FFU

     Outputpulse   Synchroniz.   Switch for   Deviation    Short
      FFU          sector FFU    high speed   FFU late     stop
       M02.05      S00.09        R0204        R0203       P10.12                                                  R0204
2125 --]  [-----]  [----  [GET] ----  [-] -----]  [-------------------------------------------------------- (PUT) --  Switch for high speed
                 50-150                                     P.S032H                                                  of FFU
                 250-350

     Switch for
      high speed
       R0204        K60000       K00000                                                                           R0204
2126 -- [GET] ----  [>] ----  [GET] ------------------------------------------------------------------------- (PUT) --  Switch for high speed
                                                                                                                         of FFU

     Switch for
      high speed
       R0204        K00600       K00600                                                                           R0204
2127 -- [GET] ----  [>] ----  [GET] ------------------------------------------------------------------------- (PUT) --  Switch for high speed
                                                                                                                         of FFU

     Reference    Switch for   Deviation
      timer FFU    high speed   FFU ahead
       R0205        R0204       R0202       K00005                                                               O15.14
2128 -- [GET] ----  [>] ----  [GET] ----  [<] ------------------------------------------------------------- (L) ---  High speed FFU
                                                                                                              G001

     Main motor   Deviation
      high speed   FFU late
       O14.01      R0203       K00010                                                                           O15.14
2129 --]  [----  [GET] ----  [>] ------------------------------------------------------------------------- (L) ---  High speed FFU
       K002                                                                                                   G001
```


2130
Outputpulse FFU M02.05
Machine in position 6 M00.06
Demand II short stop M06.05
Start sector FFU M05.14
Short stop PI0.12 P.S032H
O15.14 (U) G001
High speed FFU
2131
Start sector FFU S00.06 65-264
Outputpulse FFU M02.05
Main motor high speed O14.01 K002
Sorting outfeed FFU T0014.1 0s070 1s500
M05.15 (U)
Low speed FFU
Start sector FFU S00.06 65-264
Sorting outfeed FFU T0014.2 0s900 1s500
2132
Stop pos. FFU I04.11 M.B041
Delay sort. sequence T0000.2 4s0 15s2
Sorting outfeed FFU T0014.1 0s070 1s500
T014 (TRN)
Sequencer sorting packages FFU

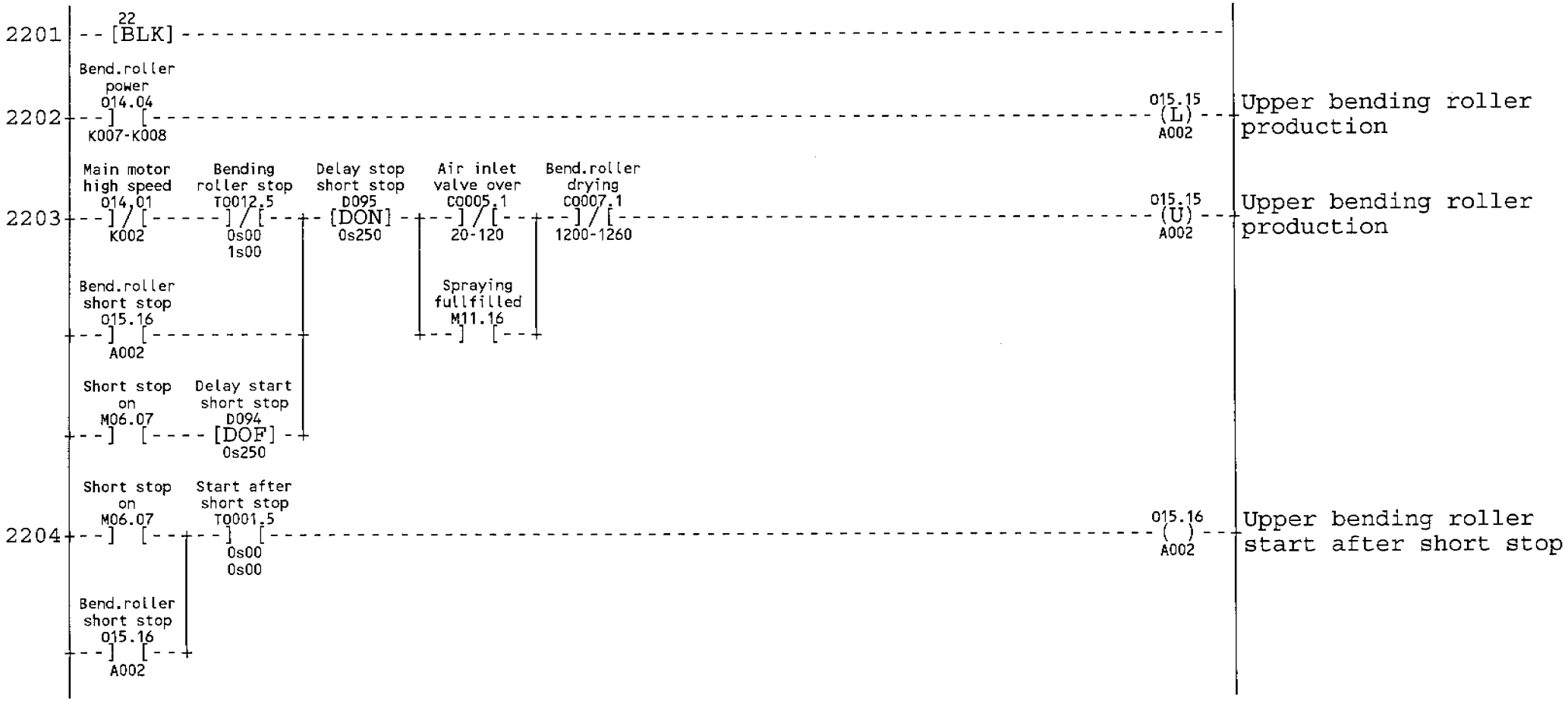
```
     Start      Start pulse
   sector FFU      FFU
     S00.06      M05.07
2133 ---] [-----[P+]-+------------------------------------------------------------(L)---Start sector FFU
     65-264             |
                        |
     Start      Start pulse
   sector FFU      FFU
     S00.06      M05.03
     ---]/[-----[P+]-+
     65-264

     Main motor
     high speed
       O14.01
2134 ---]/[------------------------------------------------------------------------(U)---Start sector FFU
       K002

     Delay sort.                Delay on    High speed
       sequence                redundancy      FFU
       T0000.2                  M14.16        O15.14
2135 ---]/[-----------+---]  [-----]/[------------------------------------------------(L)---Low speed FFU
       4s0                |                    G001
       15s2               |
                          |
     Start      End start  |
   sector FFU    sequence  |
     M05.14      T0000.1   |
     ---]  [-----]  [---+
                 10s0
                 15s2

     High speed
       FFU
       O15.14
2136 ---]  [------------------------------------------------------------------------(U)---Low speed FFU
       G001

     External   Stop delay  Aux.output  Aux.output  Aux.output   Inching
     cleaning    of FFU     drivemotor  startseq.   stopseq.      FFU
     M06.17      M11.05      M12.01      M14.00      M14.02      P10.04
2137 ---]/[-----]/[-----]/[-----]/[-----]/[-----]/[-----------------------------------(U)---Low speed FFU
                                                   P.S009

     Ready      External   Inching     Inching
     cleaning   cleaning   mainmotor     FFU
     M06.10     M06.17      P10.03      P10.04
2138 ---]  [-----]/[-----]/[-----]/[------------------------------------------------(U)---Low speed FFU
                           P.S002      P.S009
```

```
     Low speed   Alarmstatus
       FFU        in FFU
     M05.15      M15.04
2139 ---] [---+---] [-------------------------------------------------------( )---Start FFU
              |                                                            O15.13
              |                                                             G001
     High speed |
       FFU      |
     O15.14     |
     ---] [---+
       G001

     Machine in                Package    Pack.eject   Speeddeterm   Package
       position 6              ejector    FFU activ.      FFU        ejector
     M00.06                    I02.06     M10.13       M12.02       P10.17
2140 ---] [-----------+---]/[-----] [-----] [-----]/[-------------------------( )---Drop chute FFU on
                      |                                                     M11.06
                      |                                                     M.S019                P.S019
     Machine in       |
     position5-7      |
     M00.14           |
     ---] [-----]  [---+
                 Drop chute
                   FFU on
                 M11.06

     Outputpulse   Synchron.   Pulse sync.
       FFU         drop chute   drop ch.FFU
     M02.05        D032         M05.17
2141 ---]/[----[DON]----[P+]-------------------------------------------------( )---Syncronization
                   Os33                                                    M11.14   drop chute FFU

     Short stop    Syncroniz.
       on          drop ch.FFU
     M06.07        M11.14
2142 ---]/[-----] [-------------------------------------------------------------(L)---Drop chute FFU
                                                                            O14.07
                                                                            M.Y027

     Syncroniz.    Drop chute
     drop ch.FFU     FFU on
     M11.14        M11.06
2143 ---] [---+---]/[-------------------------------------------------------------(U)---Drop chute FFU
              |                                                             O14.07
              |                                                             M.Y027
     Speeddeterm |
       FFU       |
     M12.02      |
     ---]/[---+
```

```
     Infeed FFU   Pulse inf.
     right cong.  congestion
       I04.12      M16.03                                                  M16.02
2144 ---] [---+---[P+]-----------------------------------------------------( )---  Pulse infeed FFU
       M.B044    |
                 |
     Infeed FFU  |
     left cong.  |
       I10.00    |
    +---] [---+  |
       M.B052

       Pulse     Drop chute   Main motor
     infeed FFU    FFU        high speed
       M16.02     O14.07       O14.01                                      M37.17
2145 ---] [-----] [-----] [-----------------------------------------------( )---  Triggpulse for
                 M.Y027       K002                                                 shiftregister

       Pulse
     infeed FFU
       M16.02                                                              R0020
2146 ---] [-----------------------------------------------------------------(SHR)---  Sequencer for packages
                                                                                      into FFU

       Pulse     Pack.in FFU
     infeed FFU   sequencer
       M16.02      R0020      K0010H     K00000                             M16.04
2147 ---] [----[GET]---[AND]----[>]-----------------------------------------(L)---  Memory package in outfeed
                                                                                      FFU

     Outfeed FFU  Outfeed FFU
     congestion     pulse
       I04.10      M16.05                                                  M16.04
2148 ---] [-----[P+]---+-----------------------------------------------------(U)---  Memory package in outfeed
       M.B043          |                                                              FFU
                       |
     Outfeed FFU  Outfeed FFU |
     congestion     pulse     |
       I04.10      M16.06     |
    +---] [-----[P-]---+      |
       M.B043                 |
                              |
     Pulse alarm  Alarmstatus |
       reset       in FFU     |
       M05.11      M15.04     |
    +---] [-----] [---+       |
```

```
     Pulse alarm   Alarmstatus
       reset        in FFU
      M05.11        M15.04        K00000                                                  R0020
2149 ---] [-----] [---+--[GET]-----------------------------------------------------------(PUT)--  Sequencer for packages
                                                                                                  into FFU
     Stop delay
       of FFU
      M11.05
     ---]/[-----------+

     Machine in   Main motor   Air blowing   Drop chute   Speeddeterm
     position 6   high speed   infeed FFU      FFU          FFU
      M00.06      O14.01        D004         O14.07       M12.02                            O21.05
2150 ---]/[-----] [----[DOF]----]/[-----] [-----------------------------------------------( )---  Airblowing infeed of
                   K002          3s0         M.Y027                                        M.Y028  FFU

     Oilpressure  Speeddeterm  Oilpressure
       FFU          FFU          FFU
      I04.17       M12.02        D031                                                     M15.01
2151 ---] [-----]/[---+--[DON]-----------------------------------------------------------( )---  Oilpressure of FFU
      M.B056                     59s0

     Oilpressure  Speeddeterm
       FFU          FFU
      I04.17       M12.02
     ---]/[-----] [---+
      M.B056

     Stop delay   Stop ext.
       of FFU     conveyor
      M11.05        D016                                                                   O14.06
2152 ---] [---+--[DOF]-------------------------------------------------------------------( )---  External conveyor/
                 2m00s                                                                  K014,M.Y069  external lubrication

     Inching
       FFU
      P10.04
     ---] [---+
      P.S009

     Speeddeterm  Outputpulse   Ready      Infeed FFU   Right r.fin
       FFU          FFU        cleaning   right cong.   activated
      M12.02       M02.05      M06.10       I04.12        D065                              O21.17
2153 ---] [-----] [-----]/[---*---] [----[DOF]-----------------------------------------( )---  Revfin right
                                          M.B044        0s300                            M.Y091

                                 Infeed FFU   Left r.fin
                                  left cong.   activated
                                   I10.00        D066                                      O21.16
                                *---] [----[DOF]-----------------------------------------( )---  Revfin left
                                   M.B052        0s300                                    M.Y090
```

DRIVEN BENDING ROLLER



PRODUCTION ENDED, WORK ENVIRONMENT ASEPTIC CHAMBER, INTERNAL CLEANING

```
2301 --[BLK]23 ----------------------------------------------------------------------------------
     Machine in   Venting    Service   Reset
     position 0   5 minutes  switch    EM-stop
     M00.00       M04.06     I03,07    M14.04                                          M04.04
2302 ---] [-------------+---] [---+---]/[-----] [-----------------------------------------(L)---Venting aseptic chamber
                        |         |   S005
     Machine in   FM still   Venting
     position 7   sterile    15 minutes
     M00.07       D011       M04.07
     ---] [----[DON]---+---] [---+
                1m30s
     Door guards  Outputpulse Mem door
     tower        step down   as.chamber
     I02.04       M02.01      M04.05                                                          M04.04
2303 ---] [-----] [-----] [---+-------------------------------------------------------------(U)---Venting aseptic chamber
     M.B070:1-4
     Main air
     press. lost
     M14.17
     ---] [-------------------+
     Water
     pressure
     I03,12
     ---]/[-------------------+
     M.B003
     Separator
     level
     I05.17
     ---] [-------------------+
     A304
     Ready
     cleaning
     M06.10
     ---] [-------------------+
     Max time
     venting
     T0013,0
     ---] [-------------------+
     1h00m00s
     1h00m01s
```

2304]/[Venting as. chamber M04.04 ;] [Reset EM-stop M14.04 — (U) M04.06 — Venting 5 minutes

2305]/[Service switch I03.07 S005 ;]/[Venting 15 minutes M04.07 ;] [Drying fullfilled M11.17 — (L) M04.06 — Venting 5 minutes

2306]/[Venting as. chamber M04.04 ;] [Reset EM-stop M14.04 — (U) M04.07 — Venting 15 minutes

2307] [Spray fault M10.15 ;] [Start spraying CO005.4 24-120 ;]/[Service switch I03.07 S005 ;]/[Venting 5 minutes M04.06 — (L) M04.07 — Venting 15 minutes

] [Spraying fullfilled M11.16 ;]/[Drying fullfilled M11.17 ;]/[Step down PI0.06 P.S031H

]/[Reset EM-stop M14.04 ;] [Start spraying CO005.4 24-120 ;] [Machine in position 3 M00.03 ;]/[Drying fullfilled M11.17

] [Memory to 0-position M07.13

2308] [Venting as. chamber M04.04 — (TRN) T013 — Timer venting position

2309] [Venting as. chamber M04.04 ;]/[Reset EM-stop M14.04 — (THD) T013 — Timer venting position

2310 Venting 5 min. T0013.1 (0s / 5m00s) OR Venting 15 minutes M04.07 AND Venting 15 min. T0013.2 (0s / 15m00s) → M04.10 — Venting 5 or 15 minutes

2311 Door guards tower I02.04 (M.B070:1-4) / AND Venting as. chamber M04.04 AND Venting 5 or 15 min M04.10 / → M04.05 (L) — Memory door aseptic chamber

2312 Sterile air compressor O14.11 (K010) / → M04.05 (U) — Memory door aseptic chamber

2313 Venting as. chamber M04.04 AND Venting 5 or 15 min M04.10 / → O21.03 (M.Y086) — Vacuum valve venting aseptic chamber

2314 Cleaningcup in position I04.00 (M.B049) AND Productpipe position I05.02 (M.B051) AND Clean.pipe1 in position I05.04 (M.B068:1) AND Clean.pipe2 in position I05.05 (M.B068:2) AND Ster. air pipe jetdiv I05.06 (M.B103) / AND Ster. air pipe B-val. I05.07 (M.B104) / AND Delay on redundancy M14.16 AND Ready cleaning M06.10 AND Wrong pos. AP-valve(B) M06.16 / → M06.12 — Conditions for internal cleaning

2315 Steam low temperature I06.01 (A202) AND Delay steam alarm D092 [DOF] (10s0) OR Key signal steambarr. M07.17 OR Proc.signal steambarr. M07.12 AND Delay disp. 8 seconds C0016.2 (8-965) AND Condition int. clean M06.12 → M06.12 — Conditions for internal cleaning

```
     Selector   Step      Condition
      switch    Up        int. clean
      PI0.07    PI0.05    M06.12
2316 --] [------] [-+----] [-------------------------------------------( )--- Process signal
      P.S007    P.S030H  |                                          O17.07  signal ready for CIP
                         |                                           K111
      Step      Ready    |
      down      for CIP  |
      PI0.06    O17.07   |
     --] [--+---] [--+
      P.S031H  |  K111  |
               |        |
      Selector |        |
      switch   |        |
      PI0.07   |        |
     --]/[--+
      P.S007

      Clean.thr.
      prod.valve
      I03.05
2317 --] [-------------------------------------------------------------( L )--- Process signal cleaning
      X1.362                                                          M07.12  through product valve (A)

      Cleaning of
      steam barr.
      I03.06
2318 --] [-------------------------------------------------------------( L )--- Key signal cleaning
      S004                                                            M07.17  of steambarrier valve (C)

      Ready
      cleaning
      M06.10
2319 --]/[-------------------------------------------------------------( U )--- Process signal cleaning
                                                                      M07.12  through product valve (A)

      Ready
      cleaning
      M06.10
2320 --]/[-------------------------------------------------------------( U )--- Key signal cleaning
                                                                      M07.17  of steambarrier valve (C)
```

EXTERNAL CLEANING

2401 -- [BLK] 24

2402 Main motor high speed O14.01 K002]/[Sequencer cleaning C0003.0 720-730]/[Ready cleaning M06.10 [Levelfault cleantray M10.05]/[Resetsafety monitors M14.05 [Reset overl.prot. M14.07 [Delay on redundancy M14.16 [Alarmstatus in FFU M15.04 [Rotationmon paperweb M15.12]/[M06.11 ( ) — Conditions for external cleaning

2403 Cond. ext. cleaning M06.11] [Malfunction circul.pump M11.13]/[M06.11 ( ) — Conditions for external cleaning

2404 Outputpulse step up M02.00] [Selector switch P10.07 P.S007]/[Cond. ext. cleaning M06.11] [Delay on ext.clean. M16.17 [M06.17 ( ) — External cleaning

Step down P10.06 P.S031H] [External cleaning M06.17] [

Selector switch P10.07 P.S007] [

2405 Ready cleaning M06.10] [Delay on ext.clean. D104 3s5 [DON] M16.17 ( ) — Delay on external cleaning available

2406 Hydraulunit temperature I03.15 M.B045] [Machine in position 1 M00.01] [Inching condition M01.02] [Inching mainmotor P10.03 P.S002] [Selector switch P10.07 P.S007]/[Overload jawsystem M04.14]/[Resetsafety monitors M14.05] [Reset overl.prot. M14.07] [Main motor high speed O14.01 K002]/[O14.00 K001 ( ) — Main motor low speed

External cleaning M06.17] [

```
      Machine in   Outputpulse   Step up
      position 7   step up       conditions
        M00.07       M02.00       M01.01
2407 --] [-----] [-----] [-----------+-------------------------------------------(  )--- Ready cleaning
                                     |                                          M06.10
      Machine in   Step up       Step        Selector
      position 0   conditions    Up          switch
        M00.00       M01.01      P10.05      P10.07
     --] [-----] [-----] [-----] [-----]/[--+
                                P.S030H     P.S007
                                            |
      Machine in   Ready         |
      position 7   cleaning      |
        M00.07       M06.10      |
     --] [-----] [-----------------+
                                  |
       Ready                      |
       cleaning                   |
       M06.10                     |
2408 --]/[-----------------------+-------------------------------------------(CTR)-- Sequencer external
                                  |                                          C003     cleaning
      Machine in   Inching       Inching     |
      position 7   condition     mainmotor   |
        M00.07       M01.02      P10.03     |
     --] [-----] [-----] [-----] [--+        |
                                P.S002       |
                                             |
       First                                 |
       water rinse                           |
       C0003,1                               |
2409 --] [--+-------------------------------------------------------------------(  )--- Waterfilling of
                                             |                                M10.04     cleaning tray
        1-90                                 |
                                             |
       Cleaning                              |
       period                                |
       C0003,2                               |
     --] [--+                                |
        141-350                              |
                                             |
       Second                                |
       water rinse                           |
       C0003,3                               |
     --] [--+                                |
        411-500                              |
                                             |
       Third                                 |
       water rinse                           |
       C0003,4                               |
     --] [--+                                |
        551-640                              |
```

2410	Flash 1 Hz M37.00	External cleaning M06.17	Aux.output stopseq. M14.02				C002 (CTU)	Sequencer filling of cleaningtray
2411	Clean.tray level I04.07 A301	Step Up P10.05 P.S030H	Fill time clean tray CV002 [GET]	K00005 [>]	External cleaning M06.17	Filling clean tray D010 [DON] 4s0	M14.02 (L)	Auxiliary output stopsequence ext.cleaning
2412	Filling of clean.water M10.04 / External cleaning M06.17 /						M14.02 (U)	Auxiliary output stopsequence ext.cleaning
2413	Filling of clean.water M10.04 /						C002 (CTR)	Sequencer filling of cleaningtray
2414	External cleaning M06.17	Filling of clean.water M10.04	Aux.output stopseq. M14.02 /				O21.06 ( ) M.Y029	External cleaning water
2415	Cleaning period C0003.2 141-350						O15.07 ( ) K112	Aux.relay for cleaningtray level
2416	Filling of clean.water M10.04	Drainvalve cleantray C0002.1 / 0-10					O20.15 ( ) M.Y002	Cleaning tray draining
2417	Cleaning period C0003.2 141-350	Clean.tray draining O20.15 M.Y002	Ext.clean. water O21.06 M.Y029				O15.06 ( ) K015	Pump detergent solution

2418	External cleaning M06.17	Aux.output stopseq. M14.02		O14.05 ( ) K012	Circulation pump external cleaning
2419	Bit angle-encoder E01.06	External cleaning M06.17	Ext.clean. water O21.06 M.Y029	C003 (CTU)	Sequencer external cleaning
2420	Sequencer cleaning C0003.0 720-730			M27.00 (L)	External clening ended: ready for lubrication
2421	Outputpulse lubrication M02.12			M27.00 (U)	External clening ended: ready for lubrication
2422	Alarm reset P10.00 P.S033H	Levelfault cleantray M10.05		M10.05 (U)	Malfunction filling cleantray
2423	Clean.tray level I04.07 A301	Fill time clean tray CV002 [GET]	K00005 [=]	M10.05 (L)	Malfunction filling cleantray
2424	Clean.tray level I04.07 A301	Fill time clean tray CV002 [GET]	K00800 [=]	M10.05 (L)	Malfunction filling cleantray
2425	Alarm reset P10.00 P.S033H	Malfunction circul.pump M11.13		M11.13 (U)	Malfunction circulation pump
2426	Circ.pump ext.clean. O14.05 K012	Clean.tray level I04.07 A301	Delay check level tray D105 [DON] 20s0	First water rinse C0003.1 1-90	M11.13 (L)	Malfunction circulation pump

LUBRICATION

2501	25 [BLK]				
2502	Outputpulse lubrication M02,12]/[	End of lubr. seq. T0010,0]/[15m00s 15m02s		I010 (TRN)	Sequencer for lubrication program
2503	Long lubrication M11,07]/[	Main motor high speed O14,01]/[K002	Central lubrication O21,04]/[M.Y017	I010 (THD)	Sequencer for lubrication program
2504	Outputpulse lubrication M02,12]/[	End of lubr. seq. T0011,0]/[15m00s 15m02s		I011 (TRN)	Sequencer for lubrication program
2505	Long lubrication M11,07]/[	Main motor high speed O14,01]/[K002	Central lubrication O21,04]/[M.Y017	I011 (THD)	Sequencer for lubrication program
2506	Outputpulse lubrication M02.12] [			M11.07 (L)	Long lubrication period
2507	Long lubr. finished T0011,1] [4m50s 15m00s			M11.07 (U)	Long lubrication period

```
      1-st stroke
      long lubr.
       T0010.1
2508 --]  [-----------+------------------------------------------------------------( )--+Central lubrication pump
        0s                                                                        M.Y017
       10s
                                  |
      2-nd stroke     Long        |
      long lubr.   lubrication    |
       T0010.2      M11.07        |
     --]  [--+--]  [--+           |
       1m10s      |               |
       1m20s      |               |
                  |               |
      3-rd stroke |               |
      long lubr.  |               |
       T0010.3    |               |
     --]  [--+    |               |
       2m20s      |               |
       2m30s      |               |
                  |               |
      4-th stroke |               |
      long lubr.  |               |
       T0010.4    |               |
     --]  [--+    |               |
       3m30s      |               |
       3m40s      |               |
                  |               |
      5-th stroke |               |
      long lubr.  |               |
       T0010.5    |               |
     --]  [--+    |               |
       4m40s      |               |
       4m50s      |               |
                  |               |
       Central     Alarm      Lubrication  Machine in
      lubrication lubrication  oilpressure  position 0
        O21.04      D021        I03.14       M00.00
2509 --]  [----[DON]----]/[--+--]/[-----------------------------------------------(L)--+Alarm low pressure
       M.Y017       8s0        M.B006      |                                   M10.07  during lubrication
                                           |
       Central     Alarm      Lubrication  |
      lubrication lubrication  oilpressure  |
        O21.04      D020        I03.14      |
     --]/[----[DON]----]  [--+             |
       M.Y017       40s0       M.B006      |
                                           |
       Central     Lubrication
      lubrication  oilpressure
        O21.04       I03.14
2510 --]  [-----]  [-----------------------------------------------------------(U)--+Alarm low pressure
       M.Y017      M.B006                                                     M10.07  during lubrication
```

```
     | Lubric.oil   Preheating                                                          |
     | high level       I                                                               |
     |   I04.01      O15.00                                                   O20.17    |
2511 |---]  [------]  [-------------------------------------------------------( )------| Central refilling
     |  M.B030       K018                                                     M.Y037    | lubrication oil
```

6+4 CHANNELS RECORDER

```
2601 --[BLK]26 ----------------------------------------------------------------------------------------------------
     |
     | Reset to zeropos.  Pulse P2-recorder  Ster.param. P2-recorder  Service switch
     | M07.14             M04.16             D044                      I03,07
2602 +---]  [-----[P+]---[DOF]5m00s-+---]/[S005-----------------------------------------------------------( )K105 O17.02
     |                                |                                                                  Sterile parameters
     | Drying fullfilled  Pulse dry fullfilled  Batch P2-recorder      |                                  on P002 recorder
     | M11.17             M13.02                D069                   |
     +---]  [-----[P+]---[DOF]30s0-+
     |
     | Perox.bath temperature  Levelfault perox.bath  Press.guard waterbath
     | I06.02                  M11,00                 M15,16
2603 +---]  [-----]/[-----]/[-----------------------------------------------------------------------( ) M12.11
     |  A203                                                                                            Operational parameters
     | Operational parameters  Drying fullfilled  Venting as. chamber  Ready cleaning  Sterilecond bypassed  on P2-recorder
     | M12,11                  M11.17             M04,04               M06,10         M10,01
2604 +---]/[-----]  [-----+---]/[-----]/[-----]/[-----------------------------------------------------( ) M12.12
     |                    |                                                                              Operational parameters
     | Steam low temperature  Spraying fullfilled                                                        on P2-recorder
     | I06,01                 M11.16                |
     +---]/[-----]  [---+
     |  A202              |
     | Airknifes temperature  Machine in position4-7  |
     | I06,06                 M00.13                  |
     +---]/[-----]  [---+
     |  A207              |
     | Squeeze rollers pos  End start sequence  |
     | I05,00               T0000.1             |
     +---]/[---+---]  [---+
     |  M.B046  |  10s0
     |          |  15s2
     | Airknives position  |
     | I05,01              |
     +---]/[---+
     |  M.B047
```

```
      | Operational  Oper.param.                                                                  |
      | parameters   P2-recorder                                                                  |
      |   M12.12        D045                                                                      |
2605  +---]  [----  [DOF]  +-------------------------------------------------------------  O17.03 ---+ Operational parameters
      |                   |                                                                  (  )    |  on P002 recorder
      |                   |                                                                  K106    |
      |  Ready       Valve clean                                                                     |
      |  for CIP     on ext.sign                                                                     |
      |  O17.07        I03.03                                                                        |
      +---]  [-----]  [--+                                                                           |
      |   K111       X1.353                                                                          |
```

MAINSINTERRUPT AND ALARMDELAYS

```
2701 --[27 BLK]-----------------------------------------------------------------------------------
     |
     |  Water pressure I03.12      Alarm water pressure D022
2702 +--] [----[DOF]-------------------------------------------------------------------( M15.02 )---  Waterpressure
     |  M.B003                     10s                                                              coolingwater
     |
     |  Oilpressure of FFU M15.01  Max.runtime lubr.fault D030
2703 +--] [--+--[DON]-------------------------------------------------------------------( M15.00 )---  Max.runtime fault centra
     |        |                    1h00m00s                                                          lubrication/FFU
     |        |
     |        |  Lubric.oil low level I04.02
     |        +--] / [--+
     |                  M.B030
     |
     |  R0254      K00000
2704 +--[GET]----[=/]-----------------------------------------------------------------------( M13.01 )---  Alarmdelay by restart
     |                                                                                                  after mainsinterrupt
     |  R0254      K03300
2705 +--[GET]----[>]-------------------------------------------------------------------------( M13.00 )---  Mainsinterrupt to long
     |                                                                                                  for sterile conditions
     |  Alarmdelay mainsinter. M13.01   Mains interrupt D005
2706 +--] [----[DON]---[GET]-----------------------------------------------------------------( R0254 )---  Storage word time
     |                 10s0                                                                             mains interrupt
```

JUMP TO MACHINELADDER POSITION 3 (STERILIZATION FULLFILLED)

2801 -- [BLK] 28

2802 --] [Hydraulunit temperature I03.15 M.B045] / [Too high speed M04.01] / [Overload jawsystem M04.14] / [Wrong pos. AP-valve(B) M06.16] / [Memory lev. too high M07.11] / [Photocells print.des. M11.10] [Water pressure M15.02] / [Time out short stop T0003.0 15m00s 16m00s] ( ) M06.14 — Jump to ladderposition sterilizing fullfilled

2803 --] [Jump to pos. 3 M06.14] / [Alarmdelay mainsinter. M13.01] / [Rotationmon paperweb M15.12] / [Press.guard waterbath M15.16] / [Magazine empty ASU M16.00] ( ) M06.14 — Jump to ladderposition sterilizing fullfilled

2804 --] [Resetsafety monitors M14.05] [Reset overl.prot. M14.07] [Power IH-units TS O16.00 K016] [Product at machine I03.04 X1.377] [Machine in design M11.11] [Jump to pos. 3 M06.14] ( ) M06.15 — Jump to ladderposition sterilizing fullfilled

--] / [Machine in position 5 M00.05] / [Machine in position 6 M00.06] / [Signal from sterilizer M10.03] / [Short stop on M06.07]

--] [Short stop on M06.07]

JUMP TO MACHINELADDER POSITION ZERO

2901 --[BLK] 29

2902 Spray fault M10,15]/[Wrong pos. airinletval M10,16]/[Productpipe position I05.02 [M.B051 Sterileair temperature I06.03 [A204 Sterilecond bypassed M10,01]/[— M07.15 ( ) — Aux.memory for jump to position 0

Spraying fullfilled M11,16]/[Spray tank air O21,14]/[M.Y035

2903 Service switch I03,07]/[S005 Aux.memory jump to 0 M07,15]/[Machine in position3-7 M00.12 [Machine in position 7 M00,07]/[— M07.13 (L) — Memory machineladder to 0-position

2904 Prepatation switch I02.16 [k128 Bottomcover perox.bath I05.13 [M.B048:1-4 Supervision B-valve CIP M06,13]/[High level separator M10,17]/[Sterileair pressure M14,03]/[— M07.16 ( ) — Aux.memory for jump to position 0

2905 Aux.memory jump to 0 M07,16]/[— M07.13 (L) — Memory machineladder to 0-position

2906 Machine in position3-7 M00.12 [Machine in position5-7 M00,14]/[Steam low temperature I06,01]/[A202 Delay reset to pos. 0 D099 [DON] 1m00s00 — M07.13 (L) — Memory machineladder to 0-position

2907 SA SS elem. broken I02,12]/[A450 Delay disp. 4 seconds C0016,3 [4-965 Service switch I03,07]/[S005 Venting as. chamber M04,04]/[Ready cleaning M06,10]/[Main motor high speed O14,01]/[K002 — M07.13 (L) — Memory machineladder to 0-position

LS SS elem. broken I02,13]/[A451

2908 Machine in position 0 M00.00] [Alarm reset P10.00] [P.S033H — M07.13 (U) — Memory machineladder to 0-position

Machine in position 0 M00.00] / [Alarmdelay mainsinter. M13.01] [

2909 Mainsinterr to long M13.00] [— Delay power failure D100 [DON] 0s500 — M07.14 ( ) — Reset machineladder to zeroposition

Main air press. lost M14.17] [

Memory to 0-position M07.13] [Stop delay of FFU M11.05] / [Main motor high speed O14.01] / [K002

Sequencer cleaning C0003.0] [720-730 Ready cleaning M06.10] [Ready for CIP O17.07] / [K111

Door guards tower I02.04] / [M.B070:1-4 Machine in position3-7 M00.12] [Sterilecond bypassed M10.01] / [Preheating I O15.00] [K018

Emergency stops I02.00] / [A012

ALARM 1 TO 16 ON ALARMDISPLAY (PL0.00-17)

```
5001 --[BLK]50 ------------------------------------------------------------------------------------
     New alarms trans 1 R0140   New alarms store 1 R0146
5002 --[GET]---- [-] ------------------------------------------------------------ (PUT)M23 --Word alarm encoding
                                   Low pressure water P.H001
     Water pressure M15.02
5003 ---]/[------------------------------------------------------------------------------ (L)M23.00 ---Bit alarm encoding
                                   Low pressure main air P.H002
     Main air press. lost M14.17
5004 ---]  [------------------------------------------------------------------------------ (L)M23.01 ---Bit alarm encoding
                                   Safety monitors activated P.H003
     Resetsafety monitors M14.05   Reset upper door ASU M14.11
5005 ---]/[-----]  [--------------------------------------------------------------------- (L)M23.02 ---Bit alarm encoding
                                   Emergency stops activated P.H004
     Reset EM-stop M14.04
5006 ---]/[------------------------------------------------------------------------------ (L)M23.03 ---Bit alarm encoding
                                   Supervision of door monitors tower P.H006
     Reset EM-stop M14.04   Reset door guards tow. M14.10
5007 ---]  [-----]/[--------------------------------------------------------------------- (L)M23.05 ---Bit alarm encoding
                                   Too high speed P.H007
     Too high speed M04.01
5008 ---]  [------------------------------------------------------------------------------ (L)M23.06 ---Bit alarm encoding
                                   Temperature IH-units transversal sealing P.H008
     Temperature IH-unit,TS I02.11   Delay sort. sequence T0000.2
5009 ---]/[-----]  [--------------------------------------------------------------------- (L)M23.07 ---Bit alarm encoding
     A401-A402                     4s0
                                   15s2
```

Overload protections motors tripped P.H010

5010 Reset overl.prot. M14.07]/[— M23.11 (L) — Bit alarm encoding

Service switch activated P.H011

5011 Service switch I03.07 S005] [— M23.12 (L) — Bit alarm encoding

Oil pressure of lubrication oil P.H012

5012 Lurication fault M10.07] [— M23.13 (L) — Bit alarm encoding

Low level of lubrication oil P.H013

5013 Lubric.oil low level I04.02 M.B030]/[— M23.14 (L) — Bit alarm encoding

Temperature oil hydraulic unit P.H014

5014 Hydraulunit temperature I03.15 M.B045]/[— M23.15 (L) — Bit alarm encoding

Low level tank hydraulic unit P.H015

5015 Hydraulunit low level I03.17 M.B045]/[— M23.16 (L) — Bit alarm encoding

Overload in jaw system P.H016

5016 Reset jaw overload M14.06]/[— Reset door guards tow. M14.10] [— M23.17 (L) — Bit alarm encoding

5017 New alarms store 1 R0146 [GET] — Word alarm encoding M23 [AND] — Word alarm encoding M23 [GTH] — New alarms trans 1 R0140 (PTH) — R0146 (PUT) — New alarms store 1

ALARM 17 TO 32 ON ALARMDISPLAY (PL1.00-17)

5101 -- [BLK] 51 ----------

5102 -- [GET] New alarms trans 2 R0141 ---- [-] New alarms store 2 R0147 ---------- (PUT) M23 -- Word alarm encoding

Low voltage PLC battery P.H017

5103 --] [-- Low PLC battery M37.15 ---------- (L) M23.00 -- Bit alarm encoding

Cover not in place ASU P.H021

5104 --]/[---- Cover in place ASU I07.10 M.B077 ----] [-- Splice selector I07.12 M.S065 ---------- (L) M23.04 -- Bit alarm encoding

Paper supply in ASU P.H022

5105 --]/[-- Paper supply I07.07 M.B066:1-2 --+--]/[-- Downcounter papersupply I07.00 P003 ---------- (L) M23.05 -- Bit alarm encoding

--] [-- Splice selector I07.12 M.S065

No paper for splicer ASU P.H023

5106 --]/[---- Paper for splicer I07.02 M.B063:1-2 ---- [DON] Delay paper for splicer D096 2s00 ---------- (L) M23.06 -- Bit alarm encoding

Magazine empty ASU P.H024

5107 --] [-- Magazine empty ASU M16.00 ---------- (L) M23.07 -- Bit alarm encoding

Rotation monitor ASU P.H025

5108 ---] [--- Rotationmon paperweb M15.12 — (L) M23.10 --- Bit alarm encoding

Strip supply stripapplicator P.H026

5109 ---]/[--- Strip supply 107,16 / M.B032 — (L) M23.11 --- Bit alarm encoding

Broken strip stripapplicator P.H027

5110 ---]/[--- Strip break 107,17 / M.B033 — (L) M23.12 --- Bit alarm encoding

Low temperature SA-element P.H028

5111 ---]/[--- SA-element temperature 106,04 / A205 ---] [--- Preheating I 015.00 / K018 ---] [--- Delay disp. 10 minutes C0016,1 / 600-965 — (L) M23.13 --- Bit alarm encoding

Delay disp. 8 seconds C0016,2 / 8-965 ---] [--- Machine in position 1 M00.01 ---] [--- Selector switch P10.07 / P.S007 ---] [---

Fault in IH-unit zone heater P.H029

5112 ---] [--- Fault in IH-unit ZH M11.02 ---] [--- Preheating I 015.00 / K018 — (L) M23.14 --- Bit alarm encoding

Low pressure in water bath P.H030

5113 ---] [--- Press.guard waterbath M15.16 — (L) M23.15 --- Bit alarm encoding

Low temperature peroxide bath, peroxide P.H031

5114 ---] [--- Mon. temp peroxide M04.15 — (L) M23.16 --- Bit alarm encoding

Bottom cover in hydrogen peroxide bath P.H032

```
      Bottomcover
       perox.bath
         I05.13
5115 --- ]/[ ------------------------------------------------------------ M23.17
      M.B048:1-4                                                          (L) --- Bit alarm encoding

      New alarms   Word alarm   Word alarm                New alarms
       store 2      encoding     encoding                  trans 2
       R0147         M23          M23                      R0141        R0147
5116 -- [GET] --- [AND] --- [GTH] ------------------------ (PTH) --- (PUT) -- New alarms store 2
```

ALARM 33 TO 48 ON ALARMDISPLAY (PL2.00-17)

5201 -- [52 BLK] ----------

5202 -- [New alarms trans 3 R0142 GET] ---- [New alarms store 3 R0148 -] ---------- (M23 PUT) -- Word alarm encoding

Low level in hydrogen peroxide bath P.H033

5203 --] [Levelfault perox.bath M11.00 ---------- (M23.00 L) --- Bit alarm encoding

Low temperature hydrogen peroxide P.H034

5204 --]/[Perox.bath temperature I06.02 A203 -----] [Preheating I 015.00 K018 -----] [Delay disp. 16 minutes C0016.0 960-965 ---------- (M23.01 L) --- Bit alarm encoding

--] [Service switch I03.07 S005 -----] [Preheating ready M06.03 --]

Sqeeze rollers in wrong position P.H035

5205 --] [Squeeze rollers pos M11.03 ---------- (M23.02 L) --- Bit alarm encoding

Air knives in wrong position P.H036

5206 --] [Airknives position M11.15 ---------- (M23.03 L) --- Bit alarm encoding

Airknives temperature P.H037

5207 --]/[B-valve closed C0007.2 0-1200 -----]/[Airknifes temperature I06.06 A207 -----] [Spraying fullfilled M11.16 ---------- (M23.04 L) --- Bit alarm encoding

Spraytime out of limits P.H038

5208 --] [Venting as. chamber M04.04 -----] [Venting 15 minutes M04.07 -----]/[Level in spray tank M06.02 ---------- (M23.05 L) --- Bit alarm encoding

Process signal cleaning of product valve (A) P.H039

5209 Proc.signal steambarr. M07.12 ---] [--- M23.06 (L) --- Bit alarm encoding

Steam temperature P.H040

5210 Steam low temperature I06.01 A202 ---]/[--- Delay disp. 8 seconds C0016.2 8-965 ---] [--- M23.07 (L) --- Bit alarm encoding

No product from process P.H041

5211 Product at machine I03.04 X1.377 ---]/[--- Request for product O17.04 K108 ---] [--- M23.10 (L) --- Bit alarm encoding

Product pipe in wrong position P.H042

5212 Productpipe position I05.02 M.B051 ---]/[--- M23.11 (L) --- Bit alarm encoding

Cleaning pipe 2 in wrong position P.H043

5213 Clean.pipe2 in position I05.05 M.B068:2 ---] [--- Ready cleaning M06.10 ---]/[--- Selector switch PI0.07 P.S007 ---] [--- M23.12 (L) --- Bit alarm encoding

Clean.pipe2 in position I05.05 M.B068:2 ---]/[--- Ready cleaning M06.10 ---] [---

AP-valve B in wrong position P.H045

5214 Wrong pos. AP-valve(B) M06.16 ---] [--- M23.14 (L) --- Bit alarm encoding

Wrong level in spray tank P.H046

5215 — Peroxide spray level I05.15 A302]/[— Start spraying C0005.4 24-120]/[— Spray fault upfilling C0005.5 19-45 [— M23.15 (L) — Bit alarm encoding

Level in spray tank M06.02] [

Cleaning pipe 1 in wrong position P.H047

5216 — Clean.pipe1 in position I05.04 M.B068:1] [— Ready cleaning M06.10]/[— Selector switch PI0.07 P.S007] [— M23.16 (L) — Bit alarm encoding

Clean.pipe1 in position I05.04 M.B068:1]/[— Ready cleaning M06.10] [

Low temperature LS-element P.H048

5217 — LS-element temperature I06.05 A206]/[— Preheating I O15.00 K018] [— Delay disp. 10 minutes C0016.1 600-965] [— Preheat.II flap.seal. O15.04 K022]/[— M23.17 (L) — Bit alarm encoding

Drying fullfilled M11.17] [

5218 — New alarms store 3 R0148 [GET] — Word alarm encoding M23 [AND] — Word alarm encoding M23 [GTH] — New alarms trans 3 R0142 (PTH) — R0148 (PUT) — New alarms store 3

ALARM 49 TO 64 ON ALARMDISPLAY (PL3.00-17)

5301 -- [53 BLK] ----------

5302 -- [New alarms trans 4 R0143 GET] ---- [New alarms store 4 R0149 -] ---------- (M23 PUT) -- Word alarm encoding

Presterilization valve in wrong position P.H049

5303 ---] [Wrong pos. airinletval M10.16 ---------- (M23.00 L) --- Bit alarm encoding

Presterilization temperature P.H050

5304 ---] [Machine in position2-7 M00.11 -----]/[Machine in position3-7 M00.12 -----]/[Sterilecond bypassed M10.01 -----]/[Presteril. air temp. I06.00 A201 ---------- (M23.01 L) --- Bit alarm encoding

Door monitors ASU activated too long P.H051

5305 ---]/[Monitors doors ASU I05.14 M.B099:1-2 ---------- (M23.02 L) --- Bit alarm encoding

Sterile air temperature P.H052

5306 ---]/[Sterileair temperature I06.03 A204 -----] [Preheating I O15.00 K018 -----] [Delay disp. 10 minutes C0016.1 600-965 ---------- (M23.03 L) --- Bit alarm encoding

Sterile air pressure P.H053

5307 ---] [Sterileair pressure M14.03 ---------- (M23.04 L) --- Bit alarm encoding

---] [Sterileair pressure I05.11 M.B018 -----] [Machine in position 0 M00.00 -----]/[Venting as. chamber M04.04 -----]/[Aux.relay LS/SA fan O17.10 K121 -----]/[Step Up P10.05 P.S030H ---

High water level in water separator P.H054

5308 High level separator M10.17] [M23.05 (L) Bit alarm encoding

Cleaning cup in wrong position P.H055

5309 Cleaningcup in position I04.00 M.B049] [Ready cleaning M06.10] / [Selector switch P10.07 P.S007] [M23.06 (L) Bit alarm encoding

Cleaningcup in position I04.00 M.B049] / [Ready cleaning M06.10] [

Printed design in wrong position P.H056

5310 Design in wrong pos. C0001.0 10-11] [Machine in design M11.11] [M23.07 (L) Bit alarm encoding

Fault in IH-units transversal sealing P.H057

5311 Fault in IH-unit,TS I02.10 A401-A402] / [Delay sort. sequence T0000.2 4s0 15s2] [M23.10 (L) Bit alarm encoding

Malfunction infeed conveyor FFU P.H058

5312 Malfunction conv. FFU M15.05] [M23.11 (L) Bit alarm encoding

Overload or rotation monitor FFU P.H059

5313 Malfunction rot.mon.FFU M15.11] [M23.12 (L) Bit alarm encoding

Overload in FFU M15.14] [

Oil pressure in FFU P.H060

5314 Oilpressure of FFU M15.01] [— M23.13 (L) — Bit alarm encoding

Malfunction outfeed FFU P.H061

5315 Malfunction outfeed FFU M15.15] [— M23.14 (L) — Bit alarm encoding

Level fault cleaning tray P.H062

5316 Levelfault cleantray M10.05] [— M23.15 (L) — Bit alarm encoding

Malfunction circul.pump M11.13] [

Low temperature ASU element P.H063

5317 Splicer ASU temperature I06.07] / [A208 — Preheating I O15.00] [K018 — Delay disp. 16 minutes C0016.0] [960-965 — M23.16 (L) — Bit alarm encoding

Service switch I03.07] [S005 — Preheating ready M06.03] [

Automatic splice M12.04] [— Memory papersplice M12.07] / [

Manual splicing I07.04] [M.S060

Low level peroxide tank P.H064

```
5318 Low level tank perox. C0004.0 ---]  [--- 900-910 ----------------------------------------------------------- M23.17 (L) --- Bit alarm encoding
     Low level tank perox M07.00 ---]  [---

5319 New alarms store 4 R0149 [GET] --- Word alarm encoding M23 [AND] --- Word alarm encoding M23 [GTH] ---------- New alarms trans 4 R0143 (PTH) --- R0149 (PUT) --- New alarms store 4
```

ALARM 65 TO 80 ON ALARMDISPLAY (PL4.00-17)

5401 -- [BLK] 54 ----------

5402 -- [GET] New alarms trans 5 R0144 ---- [-] New alarms store 5 R0150 ---------- (PUT) M23 -- Word alarm encoding

Sensorfault peroxide tank P.H065

5403 --] [-----] Level too high M07.05 [-----] Flash 1 Hz M37.00 [-- ---------- (L) M23.00 --- Bit alarm encoding

--]/[-----] Level too high M07.05 [-----] Memory lev. too high M07.11 [--

Malfunction infeed synchronization FFU P.H066

5404 --] Malfunction synch. FFU M15.13 [---------- (L) M23.01 --- Bit alarm encoding

External package supervision P.H067

5405 --] Ext.package supervision M15.03 [---------- (L) M23.02 --- Bit alarm encoding

SA short stop element broken P.H068

5406 --]/[-----] SA SS elem. broken I02.12 A450 [-----] Preheating I O15.00 K018 [-----] Delay disp. 4 seconds C0016.3 4-965 [---------- (L) M23.03 --- Bit alarm encoding

LS short stop element broken P.H069

5407 --]/[-----] LS SS elem. broken I02.13 A451 [-----] Preheating I O15.00 K018 [-----] Delay disp. 4 seconds C0016.3 4-965 [---------- (L) M23.04 --- Bit alarm encoding

Malfunction photocells printed design P.H070

5408 --] Photocells print.des. M11.10 [---------- (L) M23.05 --- Bit alarm encoding

Pipe jet diverter in wrong position P.H071

5409 Ster. air pipe jetdiv I05.06 M.B103] [Ready cleaning M06.10] [Selector switch PI0.07 P.S007] [(L) M23.06 Bit alarm encoding

Ster. air pipe jetdiv I05.06 M.B103]/[Ready cleaning M06.10]/[

Pipe B-valve in wrong position P.H072

5410 Ster. air pipe B-val. I05.07 M.B104] [Ready cleaning M06.10] [Selector switch PI0.07 P.S007] [(L) M23.07 Bit alarm encoding

Ster. air pipe B-val. I05.07 M.B104]/[Ready cleaning M06.10]/[

Upper door guard ASU activated P.H078

5411 Reset upper door ASU M14.11]/[Reset jaw overload M14.06] [(L) M23.15 Bit alarm encoding

Key signal cleaning of steambarrier valve (C) P.H080

5412 Key signal steambarr. M07.17] [(L) M23.17 Bit alarm encoding

5413 New alarms store 5 R0150 [GET] Word alarm encoding M23 [AND] Word alarm encoding M23 [GTH] New alarms trans 5 R0144 (PTH) R0150 (PUT) New alarms store 5

ALARM 81 TO 96 ON ALARMDISPLAY (PL5.00-17) / ALARM BEACON

5501 — 55 [BLK]

5502 — New alarms trans 6 R0145 [GET] — New alarms store 6 R0151 [-] — M23 (PUT) — Word alarm encoding

Surge filter tripped P.H081

5503 — Surge volt. supervision I03,02 Z101]/[— M23.00 (L) — Bit alarm encoding

Preparation selector activated P.H082

5504 — Prepatation switch I02,16 k128]/[— M23.01 (L) — Bit alarm encoding

5505 — New alarms store 6 R0151 [GET] — Word alarm encoding M23 [AND] — Word alarm encoding M23 [GTH] — New alarms trans 6 R0145 (PTH) — R0151 (PUT) — New alarms store 6

5506 — Alarm reset PI0.00 P.S033H] [— Pulse alarm reset 1-32 M22.02 [P+] — New alarms trans 1 R0140 [GET] — New alarms trans 2 R0141 [GTH] — New alarms store 2 R0147 (PTH) — R0146 (PUT) — New alarms store 1

5507 — Alarm reset PI0.00 P.S033H] [— Pulse alarm reset 33-64 M22.03 [P+] — New alarms trans 3 R0142 [GET] — New alarms trans 4 R0143 [GTH] — New alarms store 4 R0149 (PTH) — R0148 (PUT) — New alarms store 3

5508 — Alarm reset PI0.00 P.S033H] [— Pulse alarm reset 65-96 M22.04 [P+] — New alarms trans 5 R0144 [GET] — New alarms trans 6 R0145 [GTH] — New alarms store 6 R0151 (PTH) — R0150 (PUT) — New alarms store 5

5509 — First alarm M22.00]/[— New alarms trans 1 R0140 [GET] — New alarms trans 2 R0141 [GTH] — Alarm 17-32 on display PL1 P.H017-032 (PTH) — PL0 P.H001-016 (PUT)

5510]/[First alarm M22,00 — [GET] New alarms trans 3 R0142 — [GTH] New alarms trans 4 R0143 — (PTH) Alarm 49-64 on display PL3 P.H049-064 — (PUT) PL2 P.H033-048

5511]/[First alarm M22,00 — [GET] New alarms trans 5 R0144 — [GTH] New alarms trans 6 R0145 — (PTH) Alarm 81-96 on display PL5 P.H0081-096 — (PUT) PL4 P.H065-080

5512]/[Demand II short stop M06,05 —]/[Dummy adress M27,17 — [GET] New alarms trans 1 R0140 — [=/] New alarms store 1 R0146 — (L) M22.00 — First alarm

]/[Jump to pos. 3 M06,15 —] Main motor high speed O14.01 K002 —]/[Dummy adress M27,17 — [GET] New alarms trans 2 R0141 — [=/] New alarms store 2 R0147

] Memory to 0-position M07.13 —]/[Dummy adress M27,17 — [GET] New alarms trans 3 R0142 — [=/] New alarms store 3 R0148

] Reset to zeropos. M07.14 —]/[Dummy adress M27,17 — [GET] New alarms trans 4 R0143 — [=/] New alarms store 4 R0149

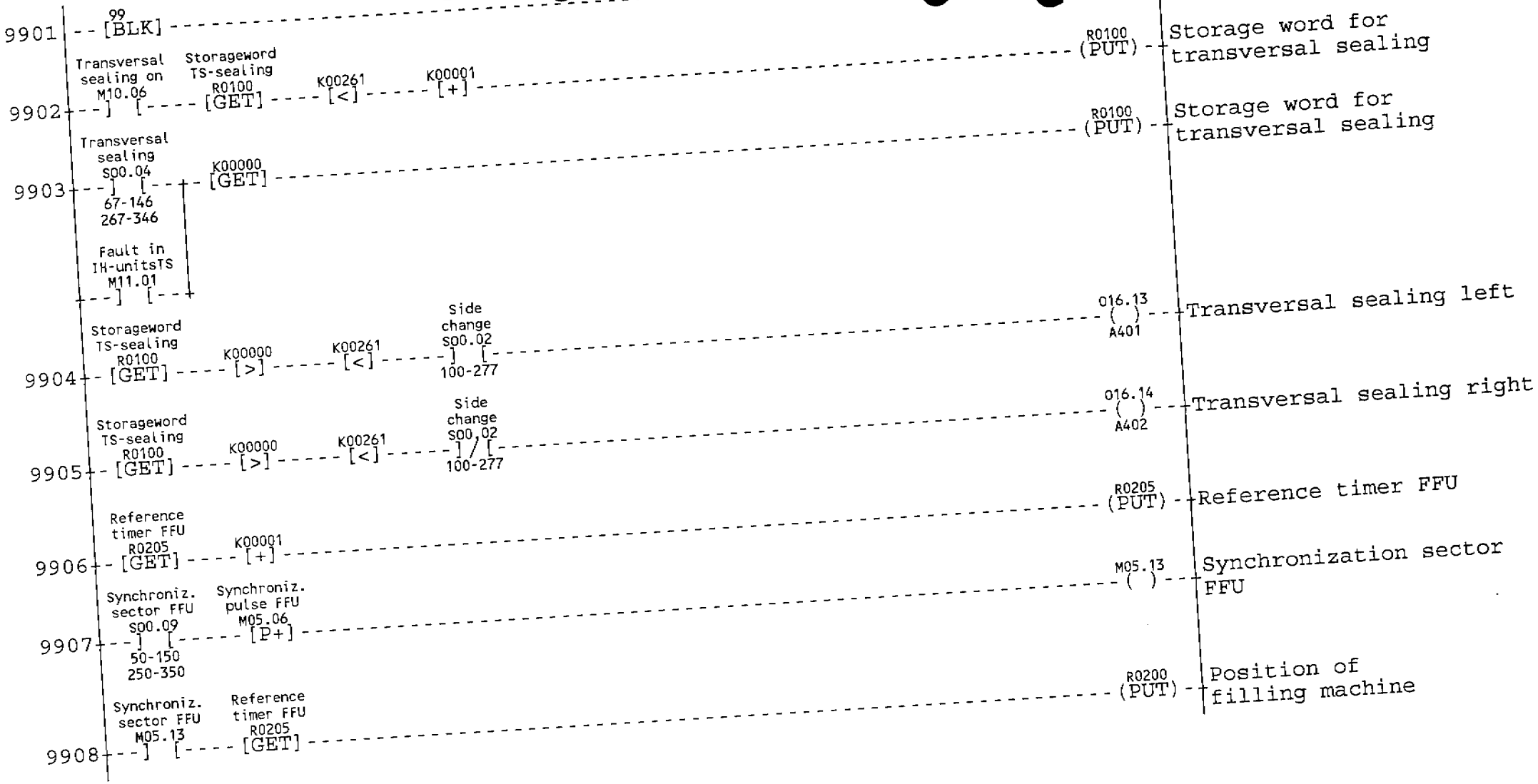
] Design in wrong pos. C0001.0 10-11 —]/[Dummy adress M27,17 — [GET] New alarms trans 5 R0144 — [=/] New alarms store 5 R0150

]/[Dummy adress M27,17 — [GET] New alarms trans 6 R0145 — [=/] New alarms store 6 R0151

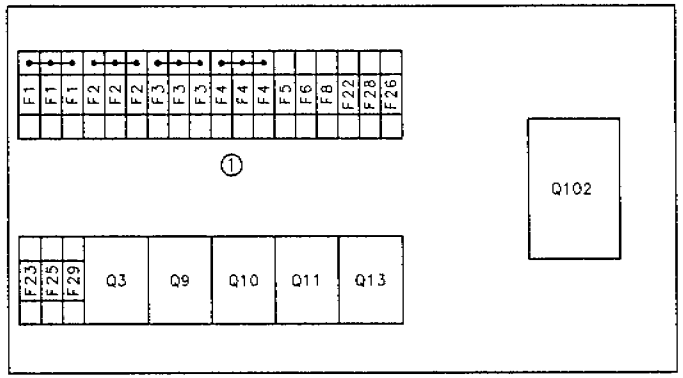
5513] Alarm reset PI0.00 P.S033H — (U) M22.00 — First alarm

MEDIUM SCAN FUNCTIONS

```
9001|--[90BLK]----------------------------------------------------------------------|
```


9901
99
[BLK]
R0100
(PUT)
Storage word for transversal sealing
9902
Transversal sealing on
M10.06
Storageword TS-sealing
R0100
[GET]
K00261
[<]
K00001
[+]
R0100
(PUT)
Storage word for transversal sealing
9903
Transversal sealing
S00.04
67-146
267-346
K00000
[GET]
Fault in IH-unitsTS
M11.01
9904
Storageword TS-sealing
R0100
[GET]
K00000
[>]
K00261
[<]
Side change
S00.02
100-277
O16.13
A401
Transversal sealing left
9905
Storageword TS-sealing
R0100
[GET]
K00000
[>]
K00261
[<]
Side change
S00.02
100-277
O16.14
A402
Transversal sealing right
9906
Reference timer FFU
R0205
[GET]
K00001
[+]
R0205
(PUT)
Reference timer FFU
9907
Synchroniz. sector FFU
S00.09
50-150
250-350
Synchroniz. pulse FFU
M05.06
[P+]
M05.13
Synchronization sector FFU
9908
Synchroniz. sector FFU
M05.13
Reference timer FFU
R0205
[GET]
R0200
(PUT)
Position of filling machine

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



FUSE PANEL

POS.	AMP.	FUNCTION
F1	25A	AIR SUPER HEATER
F2	25A	PEROXIDE BATH WATER
F3	10A	TRANSVERSAL SEALING LEFT / RIGHT
F4	10A	INDUCTOR ZONE HEATER
F5	16A	STRIP APPLICATOR
F6	16A	LONGITUDINAL SEALING
F8	10A	SPLICER ASU
F22	10A	CONTROL VOLTAGE 220V AC
F23	10A	LS/SA SHORT STOP
F25	10A	WALL SOCKET, LIGHTING FAN COOLER CABINET
F26	16A	FLAP SEALING, LEFT
F28	10A	BENDING ROLLER, UNREELING MOTOR PAPER SUPPLY
F29	16A	FLAP SEALING, RIGHT

OVERLOAD PROTECTION

POS.	THERMAL SETTING	MAGNETIC SETTING	FUNCTION
Q3	1.6-2.5A	50Hz-2A/40°C 60Hz-2A/40°C	TRANSFORMER CONTROL VOLTAGE
Q9	2.5-4A	50Hz-3.6A/40°C 60Hz-3.6A/40°C	HYDRAULIC PUMP
Q10	6.3-10A	50Hz-9.2A/40°C 60Hz-9.4A/40°C	COMPRESSOR
Q11	1.6-2.5A	50Hz-1.5A/40°C 60Hz-1.4A/40°C	PEROXIDE PUMP
Q13	1.0-1.6A	50Hz-1.45A/40°C 60Hz-1.55A/40°C	FAN MOTOR SA
Q102	63A/55°C	400A/55°C	MAINS CABINET

150±2

325±2

1296409
TBA/8-100V

① EXTRA EQUIPMENT.

Note	AA	AB	AC		BLACK LETTERS ON WHITE 100G PAPER
ECN No.	70775	71023	71182		PLASTIC EMBEDDED 0.5MM, SHINY SURFACE
Sign./Date	FRM/970404	DBI/970901	DBI/971030		SHALL BE MOUNTED ON THE INSIDE OF THE
Appr./Date	FRM/970404	DBI/970901	PGI/971030		LEFT REAR DOOR Drawing remarks ①EXTRA EQUIPMENT

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –
Machine TBA/8-1000	Denomination FUSE PANEL LABEL			
Drawing No 1296409				Page –

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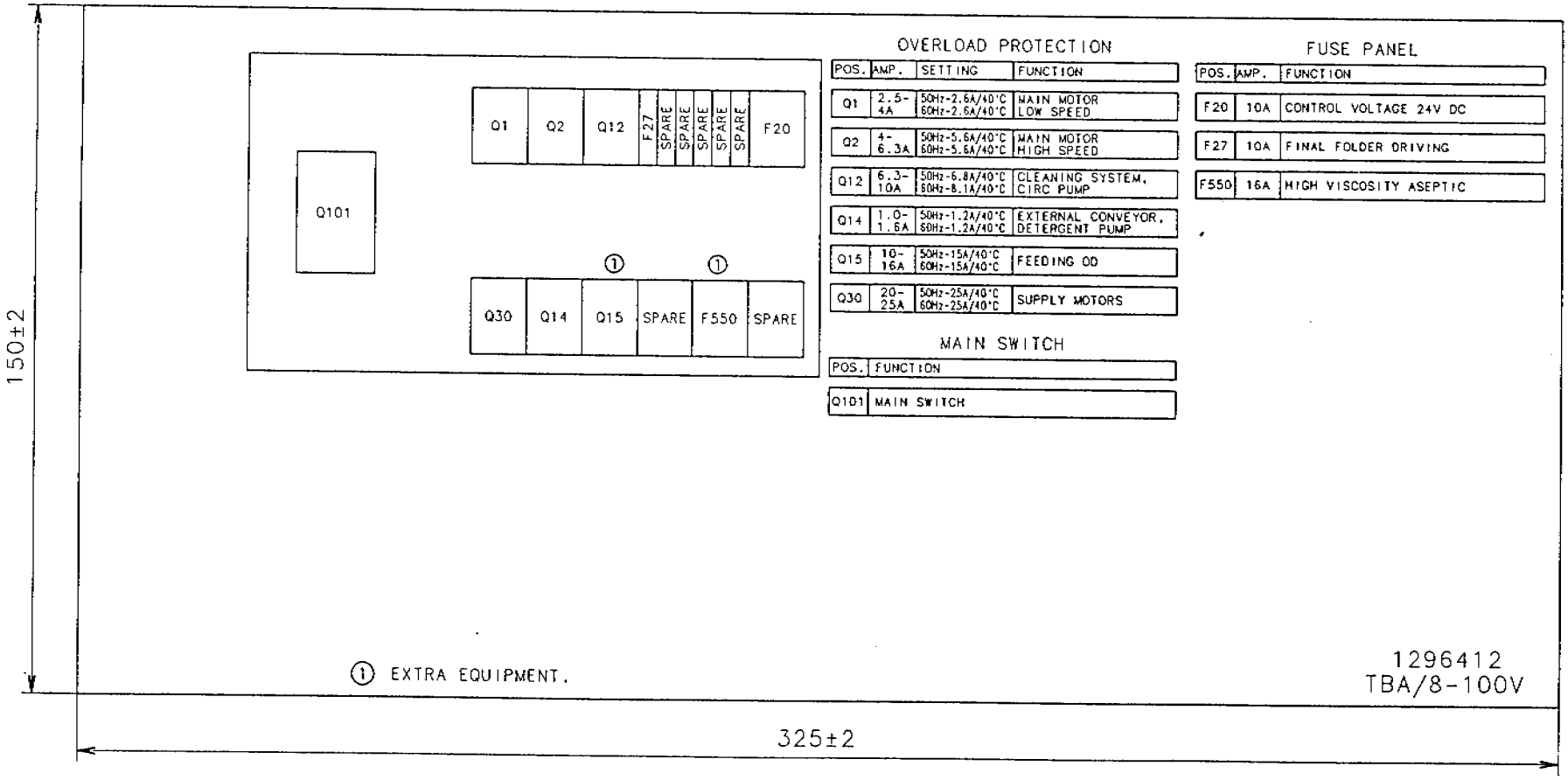

OVERLOAD PROTECTION

POS.	AMP.	SETTING	FUNCTION
Q1	2.5-4A	50Hz-2.6A/40°C 60Hz-2.6A/40°C	MAIN MOTOR LOW SPEED
Q2	4-6.3A	50Hz-5.6A/40°C 60Hz-5.6A/40°C	MAIN MOTOR HIGH SPEED
Q12	6.3-10A	50Hz-6.8A/40°C 60Hz-8.1A/40°C	CLEANING SYSTEM, CIRC PUMP
Q14	1.0-1.6A	50Hz-1.2A/40°C 60Hz-1.2A/40°C	EXTERNAL CONVEYOR, DETERGENT PUMP
Q15	10-16A	50Hz-15A/40°C 60Hz-15A/40°C	FEEDING OD
Q30	20-25A	50Hz-25A/40°C 60Hz-25A/40°C	SUPPLY MOTORS

MAIN SWITCH

POS.	FUNCTION
Q101	MAIN SWITCH

FUSE PANEL

POS.	AMP.	FUNCTION
F20	10A	CONTROL VOLTAGE 24V DC
F27	10A	FINAL FOLDER DRIVING
F550	16A	HIGH VISCOSITY ASEPTIC

① EXTRA EQUIPMENT.

1296412
TBA/8-100V

Note	AA	AB	AC		BLACK LETTERS ON WHITE 100G PAPER
ECN No.	70775	71023	71182		PLASTIC EMBEDDED 0.5MM, SHINY SURFACE
Sign./Date	FRM/970404	DBI/970901	DBI/971030		SHALL BE MOUNTED ON THE INSIDE OF THE
Appr./Date	FRM/970404	DBI/970901	PGI/971030		RIGHT REAR DOOR Drawing remarks ① EXTRA EQUIPMENT

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 971030 | Approved PGI | Date 971030 | Doc. class –

Machine: TBA/8-1000

Denomination: FUSE PANEL LABEL

Drawing No: 1296412

Page –

Tetra Pak
MODENA ITALY

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.

DELIVERED DESIGN

(1)

VOLTAGE:	230/400~	LARGEST SINGLE CURRENT:	22A
PHASES:	3	SHORT-CIRCUIT CAPACITY:	22 KA
FREQUENCY:	(2)	ELECTRICAL DIAGRAM:	649171-1001
CURRENT:	(2)		

REGISTERED ALTERATIONS

ECN	REBUILDING KIT OR VARIANT	MACHINE DEV.	TECHNICAL BULLETIN	REMARK	MANUFACTURED BY	DATE	SIGN.
(3)					(3)	(3)	

(2) FREQUENCY AND CURRENT DATA HAVE TO BE FILLED IN BY THE PRODUCTION

(3) VALID DATA TO BE COMPILED

INTRODUCED WITH AM NO	70003			DATE 960206		SIGN. PGI			(1) SELF ADHESIVE SIGN ACCORDING TO TP DRAWING 3-90194-0133
ISSUE									BLACK PRINTING ON WHITE
AM NO									
DATE									
SIGN									DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: DELIVERED DESIGN

MACHINE: TBA/8-100V

52534-30:21

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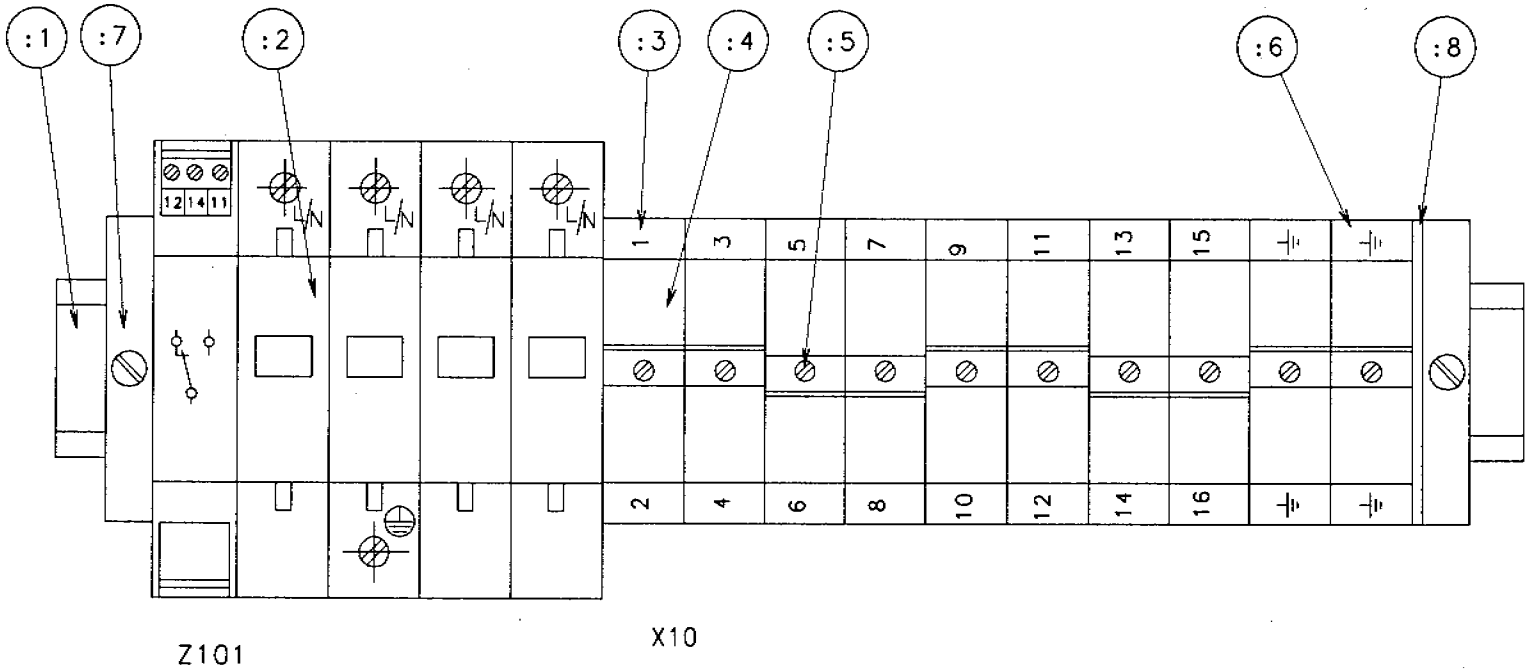

Note	A	B	C=AA	AD
ECN No.	20558	20667	22757	70775
Sign./Date	PSL/941025	PSL/950317	PSL/950420	FRM/970404
Appr./Date	PSL/941025	PGI/950317	PSL/950420	FRM/970404

Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM Date 970404 Approved FRM Date 970404 Doc. class –

Machine: TBA/8-1000

Denomination: TERMINAL BLOCK X10

Drawing No: 927280

Page –

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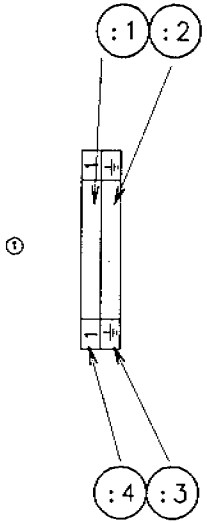

Note	- =AA	AB			① MOUNTED BETWEEN K6 AND K7
ECN No.	22843	70775			
Sign./Date	PGI/951128	FRM/970404			
Appr./Date	PGI/951128	FRM/970404			Drawing remarks

Tetra Pak	Designer FRM	Date 970404	Approved FRM Date 970404	Doc. class -
	Machine TBA/8-1000	Denomination TERMINAL X006		
	Company Tetra Brik R.& D. S.p.A.	Drawing No 1143955		Page -

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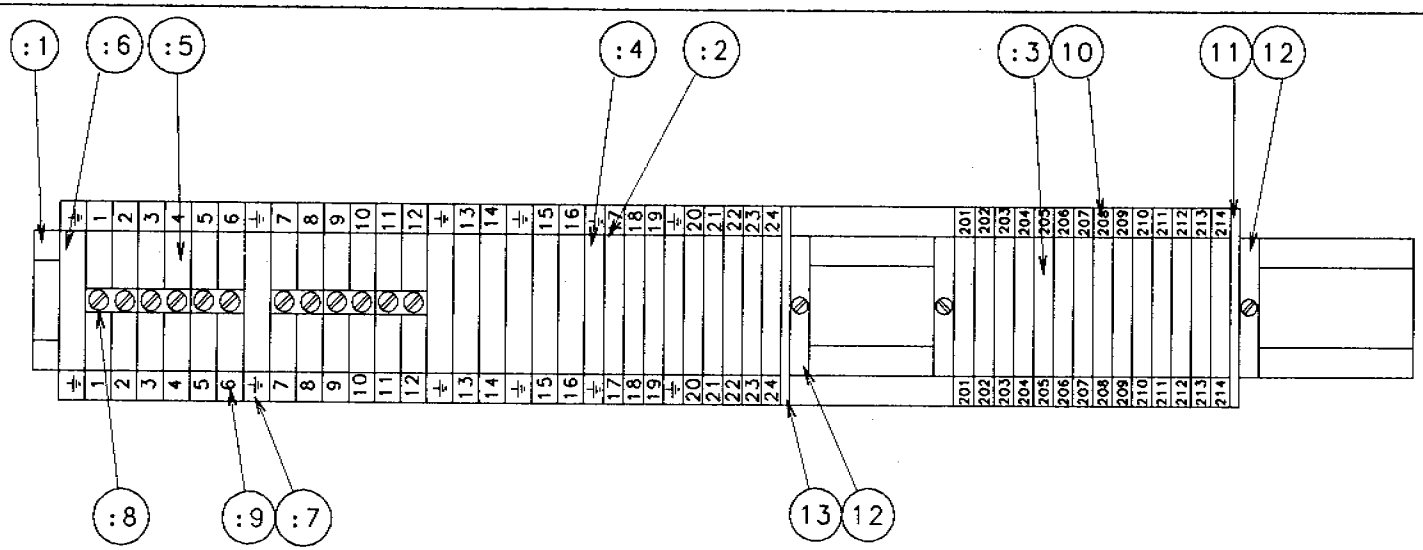

Note	-	A=AA	AB		
ECN No.	19666	22843	70775		
Sign./Date	BWM/930630	PGI/951128	FRM/970404		
Appr./Date	JAB/930630	PGI/951128	FRM/970404		Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer: FRM | Date: 970404 | Approved: FRM | Date: 970404 | Doc. class: -

Machine: TBA/8-1000

Denomination: POWER AND CONTROL TERMINAL, X1:1

Drawing No: 1143956

Page: -

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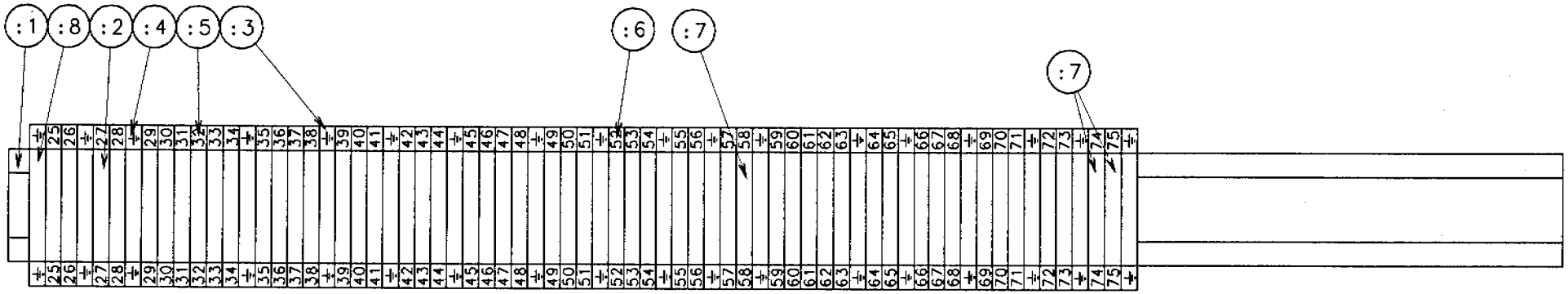

Note	-	AB	AC		
ECN No.	22843	70003	70775		
Sign./Date	PGI/951128	PGI/960206	FRM/970404		
Appr./Date	PGI/951128	PGI/960206	FRM/970404		Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM	Date 970404	Approved FRM	Date 970404	Doc. class -
Machine TBA/8-1000	Denomination POWER TERMINAL X1:2			
Drawing No 1143957				Page -

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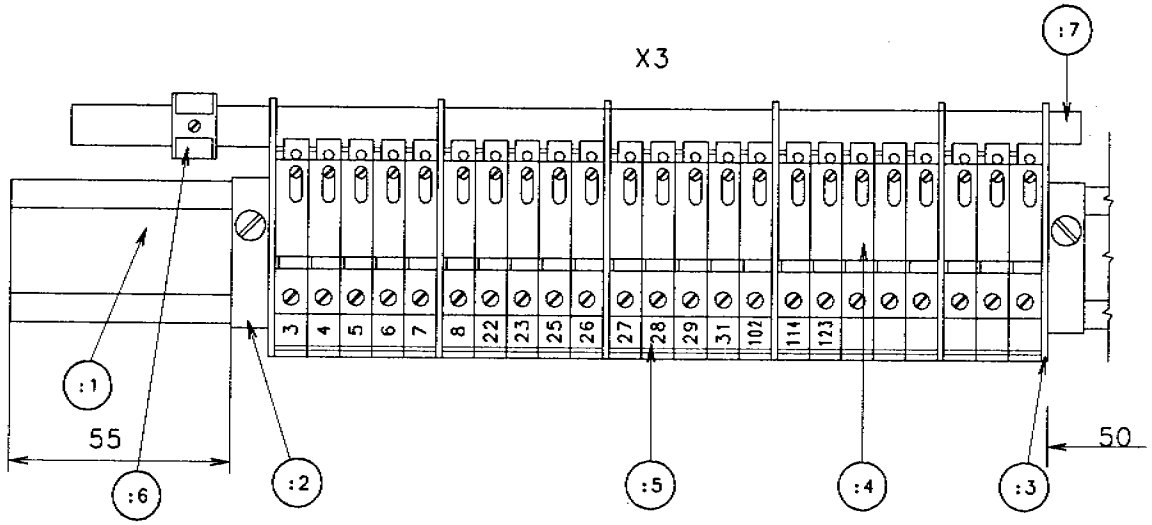

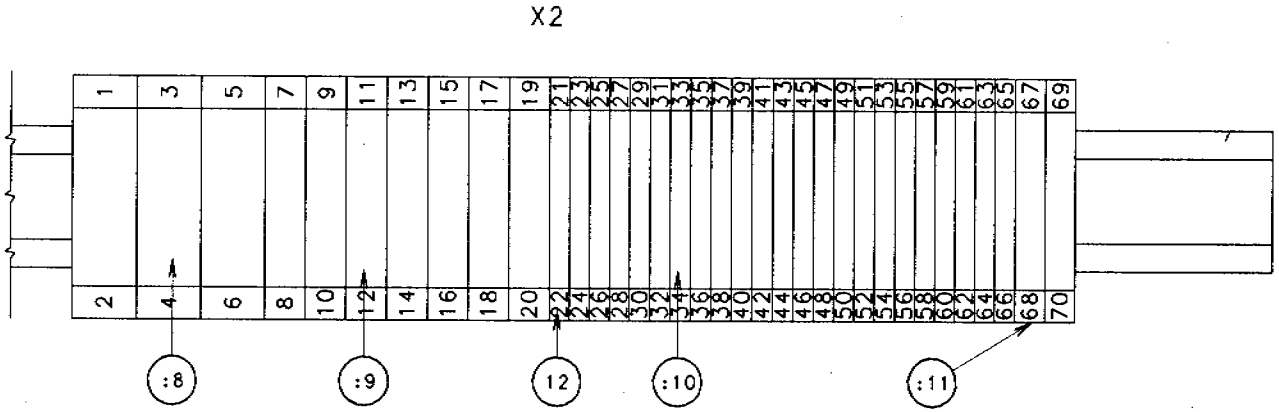

Note	- =AA	AB			
ECN No.	22843	70775			
Sign./Date	PGI/951128	FRM/970404			
Appr./Date	PGI/951128	FRM/970404			Drawing remarks

Tetra Pak

Designer FRM	Date 970404	Approved FRM	Date 970404	Doc. class -
Machine TBA/8-1000	Designation NEUTRAL AND GROUND TERM. X2-3			
Company Tetra Brik R.& D. S.p.A.	Drawing No 1143964			Page -

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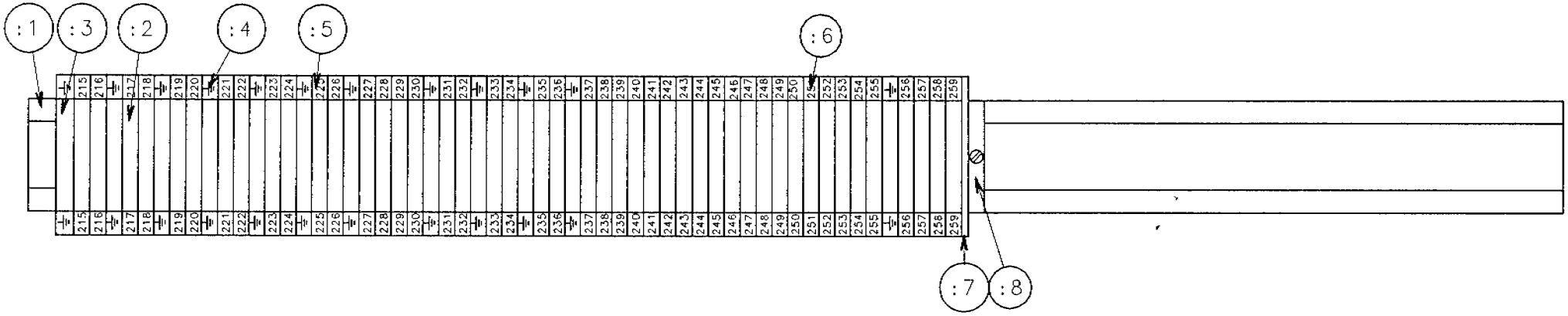

Note	- =AA	A8	AC		
ECN No.	19666	70775	71424		
Sign./Date	BWM/930630	FRM/970404	RAI/980309		
Appr./Date	JAB/930630	FRM/970404	PGI/980309		Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class -	
Machine TBA/8-1000	Denomination CONTROL TERMINAL X1:3				
Drawing No 575810				Page -	

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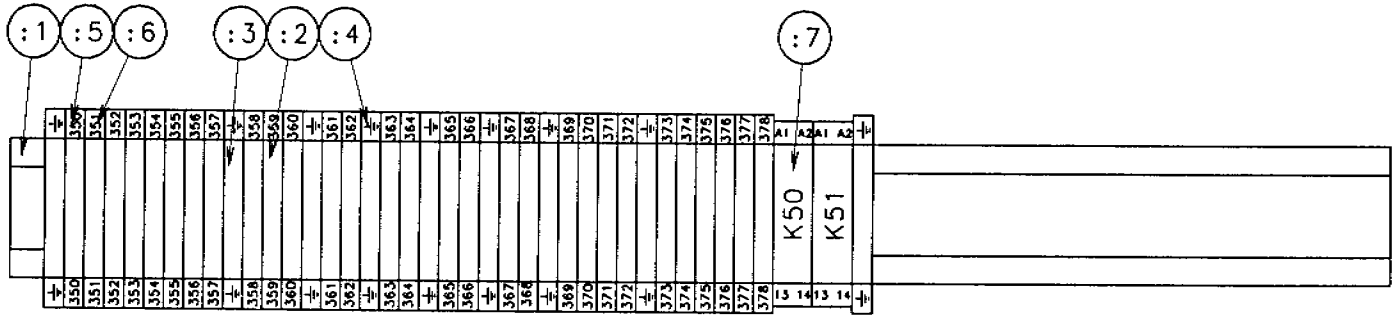

Note	-	A=AA	AB		
ECN No.	19666	20667	70775		
Sign./Date	BWM/930630	PSL/950317	FRM/970404		
Appr./Date	JAB/930630	PGI/950317	FRM/970404		Drawing remarks

Tetra Pak

Designer FRM	Date 970404	Approved FRM	Date 970404	Doc. class -
Machine TBA/8-1000	Description CONTROL TERMINAL X1:4			
Company Tetra Brik R.& D. S.p.A.	Drawing No 575811			Page -

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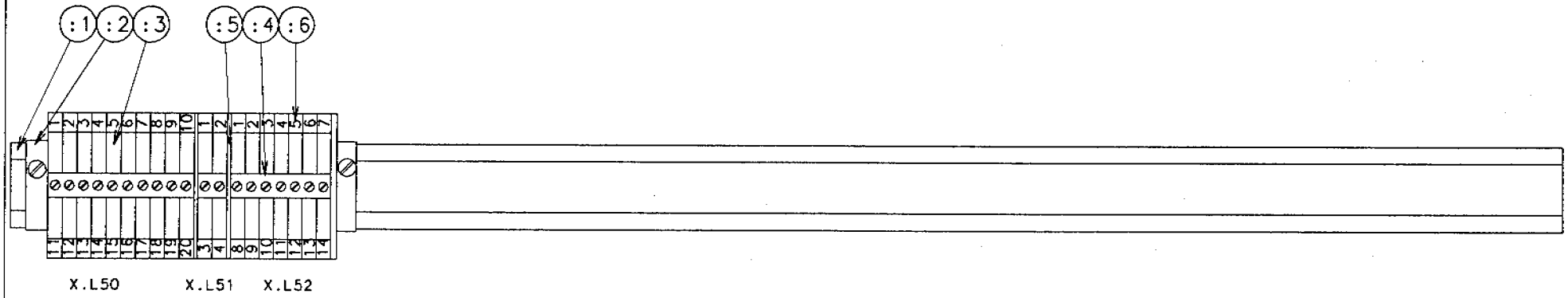

Note	-	A=AA	AB	AC	
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Appr./Date	JAB/930630	APO/940303	FRM/970404	DBI/970901	Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class -	
Machine TBA/8-1000	Denomination DISTRIBUTION TERMINAL, 220V				
Drawing No 573378				Page -	

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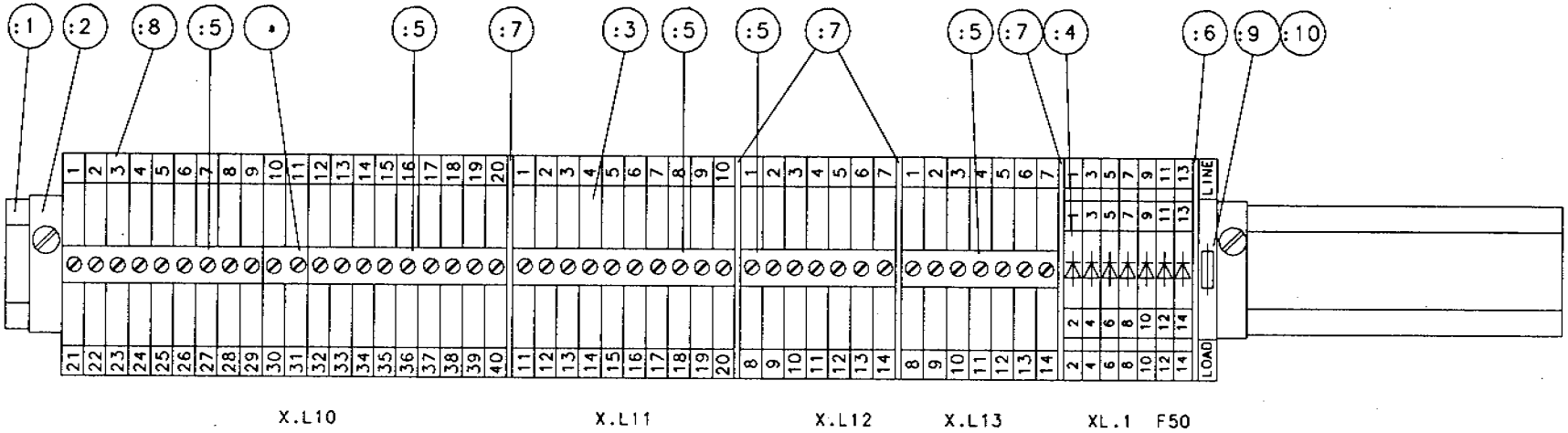

* USE A TWO TERMINAL BRIDGE TO INTER-CONNNECT THE TWO BRIDGES SECTIONS

Note	-	A=AA	AB	AC	
ECN No.	19666	20127	70775	71023	
Sign./Date	BWM/930630	PSL/940223	FRM/970404	DBI/970901	
Appr./Date	JAB/930630	APO/940223	FRM/970404	DBI/970901	Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI | Date 970901 | Approved DBI | Date 970901 | Doc. class -

Machine: TBA/8-1000

Denomination: DISTRIBUTION TERMINALS, DIODES

Drawing No: 575976

Page: -

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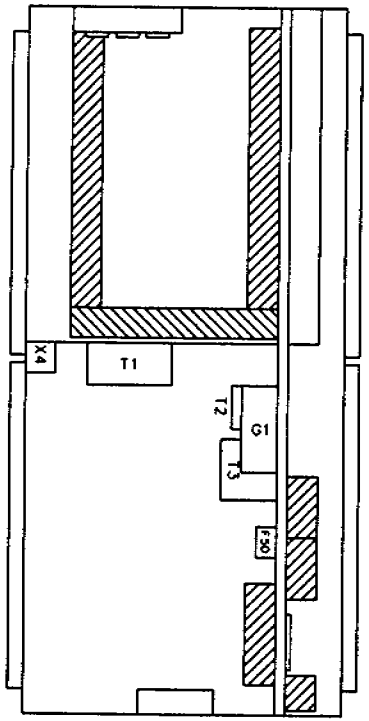
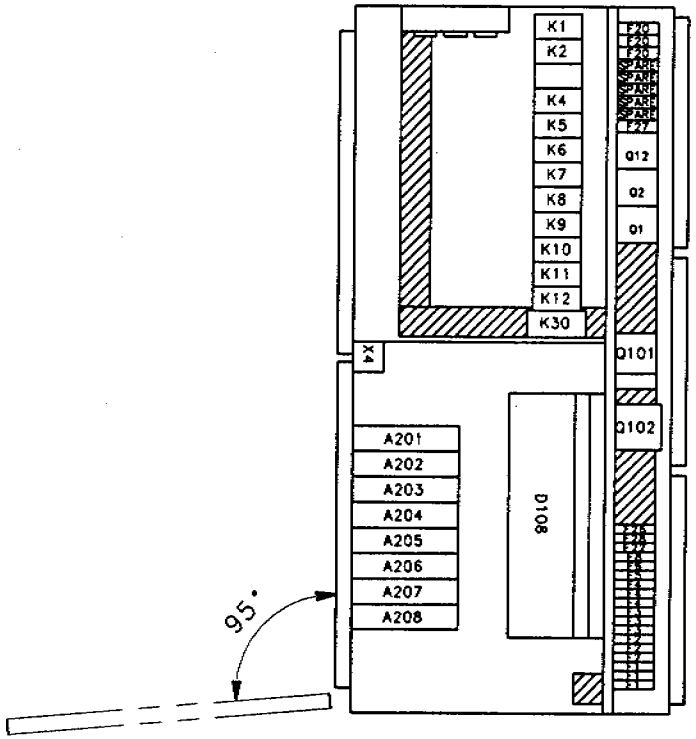


VIEW A - A



VIEW B - B

Rev.	A					Tetra Pak	Designer FRM	Date 970314	Approved FRM Date 970314	Doc. class –
ECN No.	70684						Machine TBA/8-1000	Denomination CONTROL CABINET		
Sign./Date	FRM/970314									
Appr./Date	FRM/970314				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 52534-13:30		Page –

Tetra Pak
LUND SWEDEN

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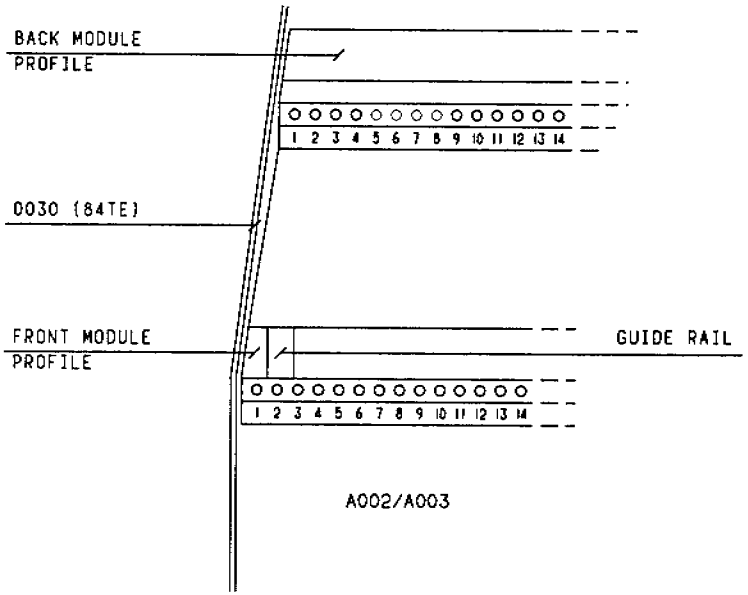

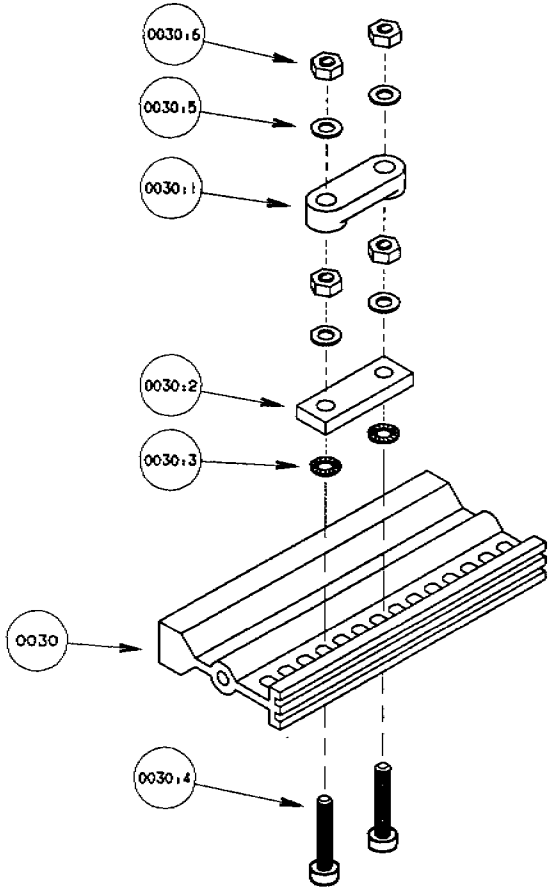

TOP FRONT SIDE
(1)

INTRODUCED WITH AM NO.	22843	DATE: 951128	SIGN. PGI	(1) MORE INFORMATIONS ON KA2 2776.30	DESCRIPTION: CIRCUIT BOARD RACK
ISSUE					MACHINE: TBA/8-100V
AM NO.					52534-14:18
DATE					
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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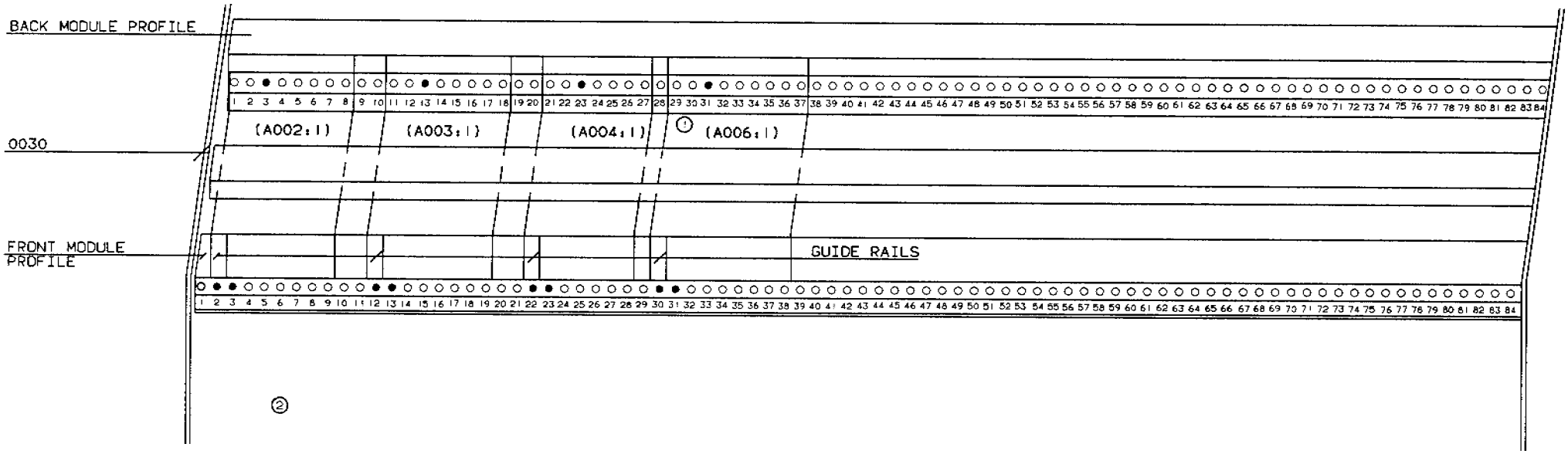

INTRODUCED WITH AM NO. 22843	DATE: 951128	SIGN. PGI	1 EXTRA EQUIPMENT 2 STARS WASHERS TO ARE TO BE PLACED ON MOUNTING SCREWS BETWEEN THE RACK AND THE MONTING PLATE
ISSUE			
AM NO.			
DATE			
SIGN			DRAWING REMARKS

DESCRIPTION: CIRCUIT BOARD RACK

MACHINE: TBA/8-100V

52534-15:18

ALTERATIONS ONLY IN CADAM

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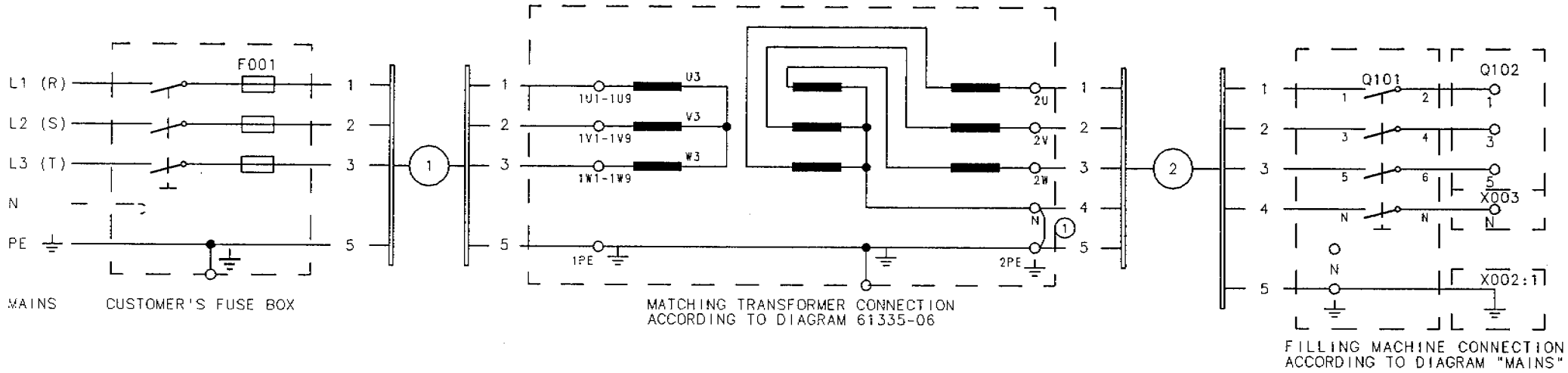
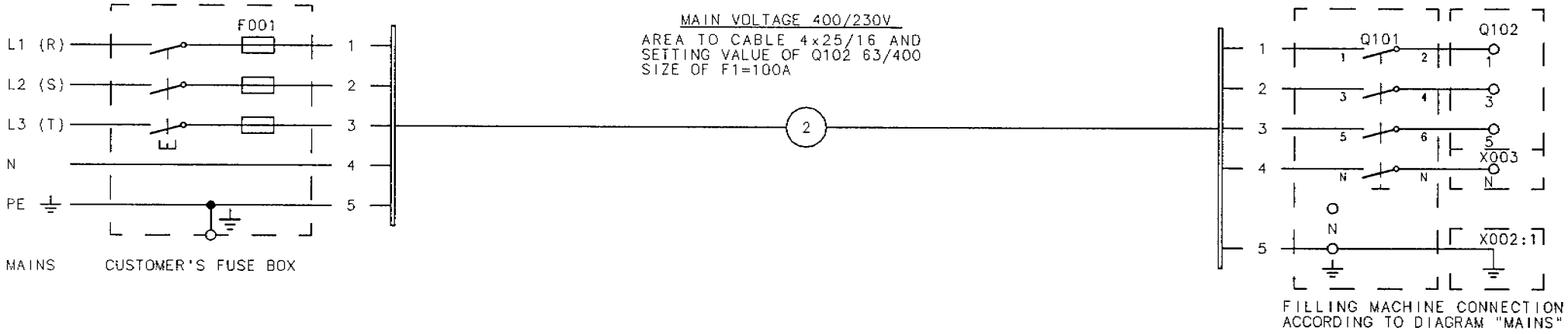
MAIN VOLTAGE 205-600V EXCEPT 400/230V



MAIN VOLTAGE 400/230V

AREA TO CABLE 4x25/16 AND
SETTING VALUE OF Q102 63/400
SIZE OF F1=100A



Note	A				ATTENTION: PROTECTIVE GROUNDING TO BE CARRIED OUT	Tetra Pak	Designer DBI	Date 970901	Approved DBI Date 970901	Doc. class –
ECN No.	71023				ACCORDING TO CURRENT LOCAL REGULATIONS		Machine TBA/8-1000	Denomination MAINS CONNECTION		
Sign./Date	DBI/970901				(1) MAKE SURE THAT THE BRIDGE IS CONNECTED. AREA 16 mm2					
Appr./Date	DBI/970901				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 61335-05:36		Page –

Tetra Pak
LUND SWEDEN

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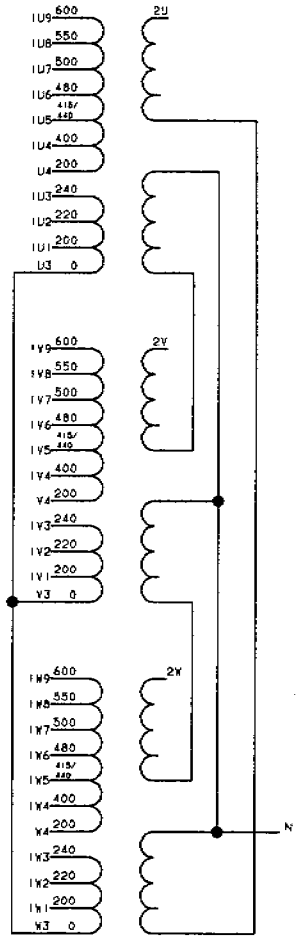
MAIN VOLTAGE	FUSES (SLOW) ①F001	AREA TO CU CABLES NO. 1	AREA TO CU CABLES NO. 2	SETTING VALUE Q102	CONNECTIONS ON MATCHING TRANSFORMER			
V	A	mm²	mm²	A	MAINS		TAP	CONNECT
600/347 3x600	100	3x16/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U9 1V9 1W9 N ⏚	1U3 - U4 1V3 - V4 1W3 - W4
550/318 3x550	100	3x16/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U8 1V8 1W8 N ⏚	1U3 - U4 1V3 - V4 1W3 - W4
500/289 3x500	125	3x25/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U7 1V7 1W7 N ⏚	1U3 - U4 1V3 - V4 1W3 - W4
480/277 3x480	125	3x25/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U6 1V6 1W6 N ⏚	1U3 - U4 1V3 - V4 1W3 - W4
440/254 3x440	125	3x25/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U5 1V5 1W5 N ⏚	1U2 - U4 1V2 - V4 1W2 - W4
415/240 3x415	160	3x25/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U5 1V5 1W5 N ⏚	1U1 - U4 1V1 - V4 1W1 - W4
3x400 [3x380]	160	3x25/16	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U4 1V4 1W4 N ⏚	1U1 - U4 1V1 - V4 1W1 - W4
240/140 3x240	250	3x70/35	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U3 1V3 1W3 N ⏚	U3 - U4 1U3-1U6 V3 - V4 1V3-1V6 W3 - W4 1W3-1W6
220/127 3x220	250	3x70/35	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U2 1V2 1W2 N ⏚	U3 - U4 1U2-1U5 V3 - V4 1V2-1V5 W3 - W4 1W2-1W5
200/115 3x200	315	3x95/50	4x25/16	63/400	PHASE PHASE PHASE N GROUND	L1 L2 L3 N PE	1U1 1V1 1W1 N ⏚	U3 - U4 1U1-1U4 V3 - V4 1V1-1V4 W3 - W4 1W1-1W4

MATCHING TRANSFORMER
90245-0024

Y/Z II-WIRED



INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JÅB	① RECOMMENDED MAINS FUSE TO ACHIEVE SELECTIVITY
ISSUE A			
AM NO 20127			
DATE 940303			
SIGN. PSL/APO			DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: MATCHING TRANSFORMER, OUTSIDE US/CAN

MACHINE: TBA/8-100V

61335-06:01

Tetra Pak
LUND SWEDEN

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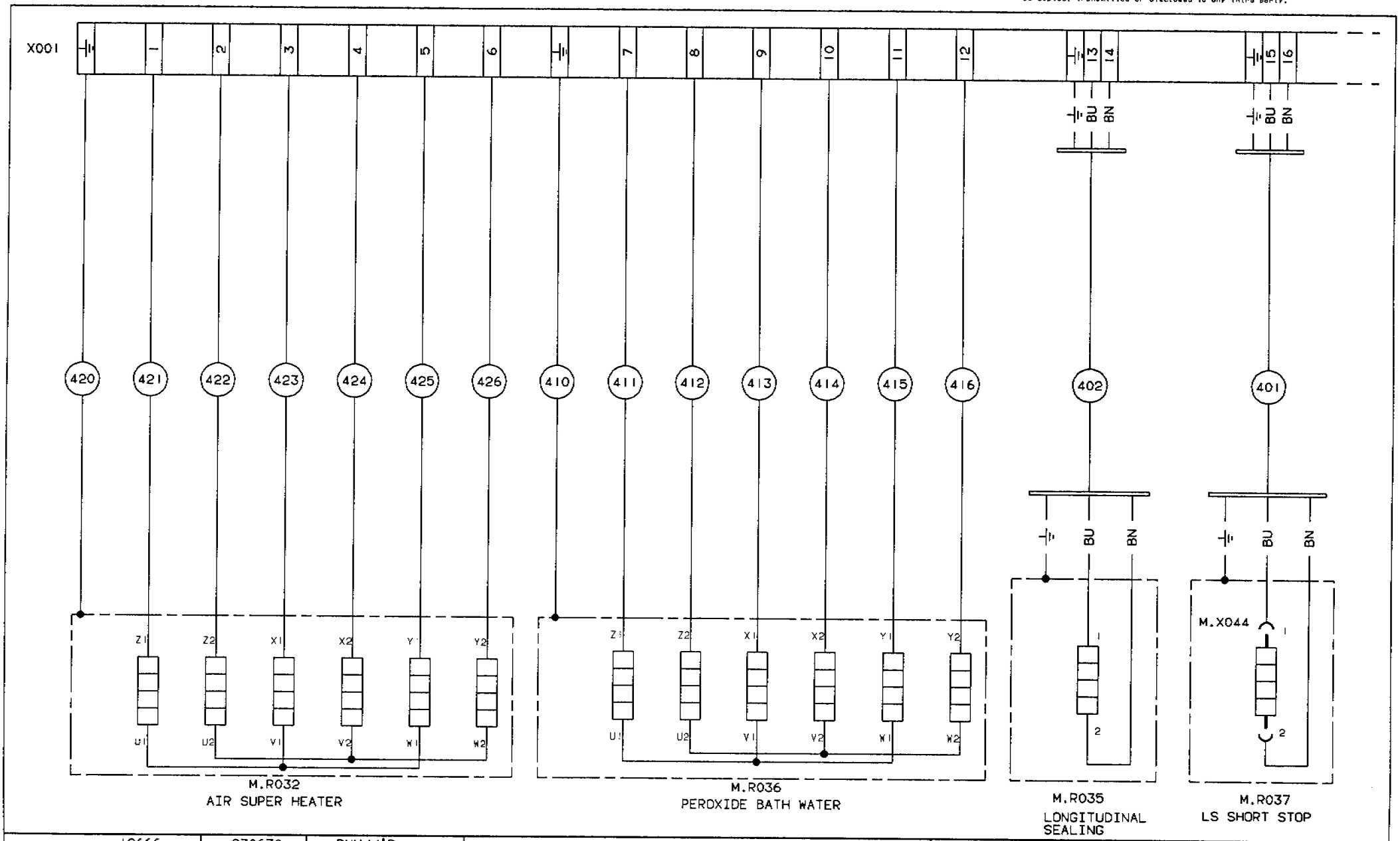

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÄB		
ISSUE				DESCRIPTION: ELEMENTS	
AM NO					
DATE				MACHINE: TBA/8-100V	61334-05:01
SIGN				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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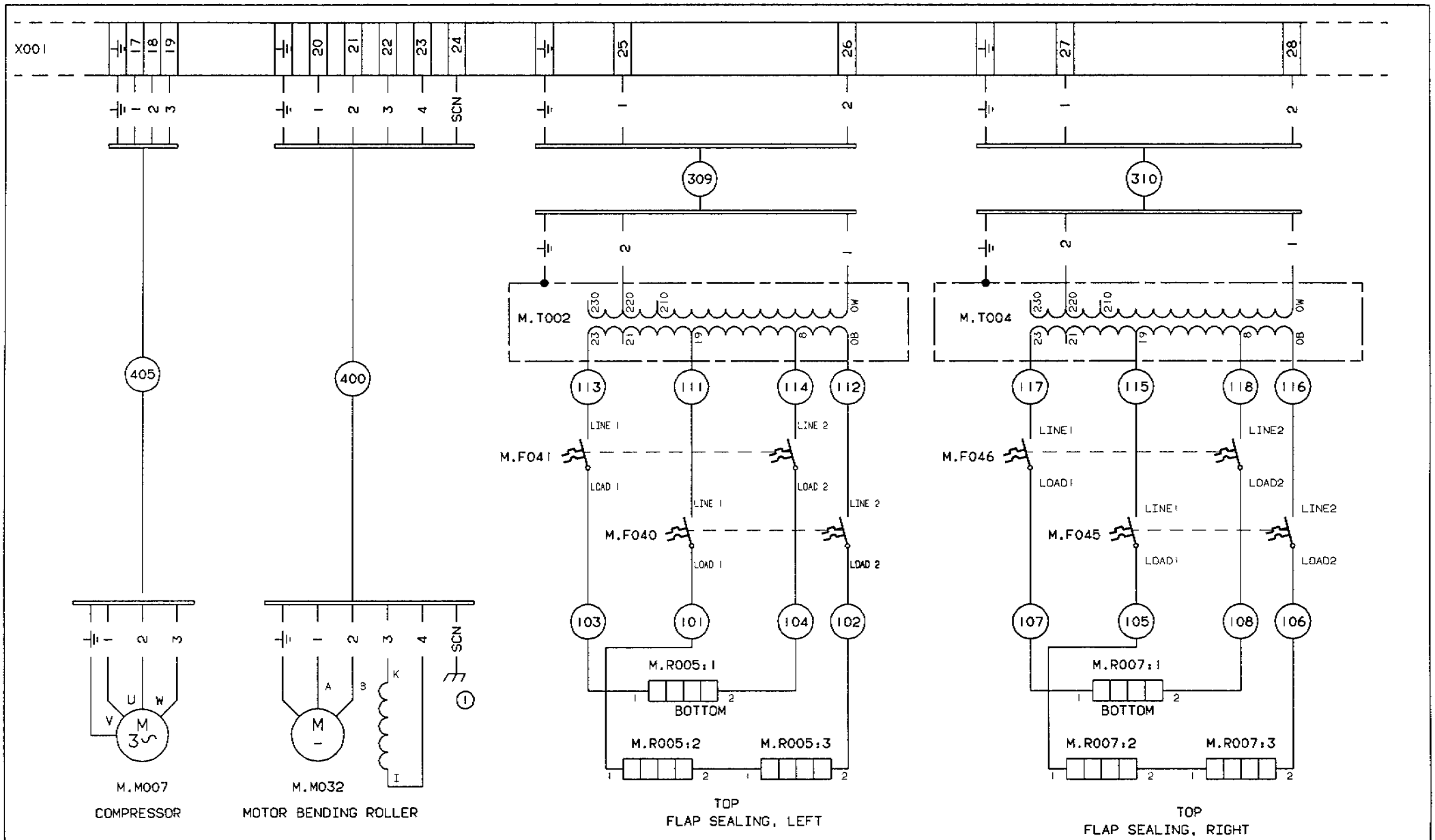

INTRODUCED WITH AM NO	22843	DATE: 951128	SIGN: PGI	① TO BE CONNECTED TO GROUND BY THE COMPRESSOR GLAND	DESCRIPTION: ELEMENTS
ISSUE					
AM NO					MACHINE: TBA/8-100V
DATE					61334-06:18
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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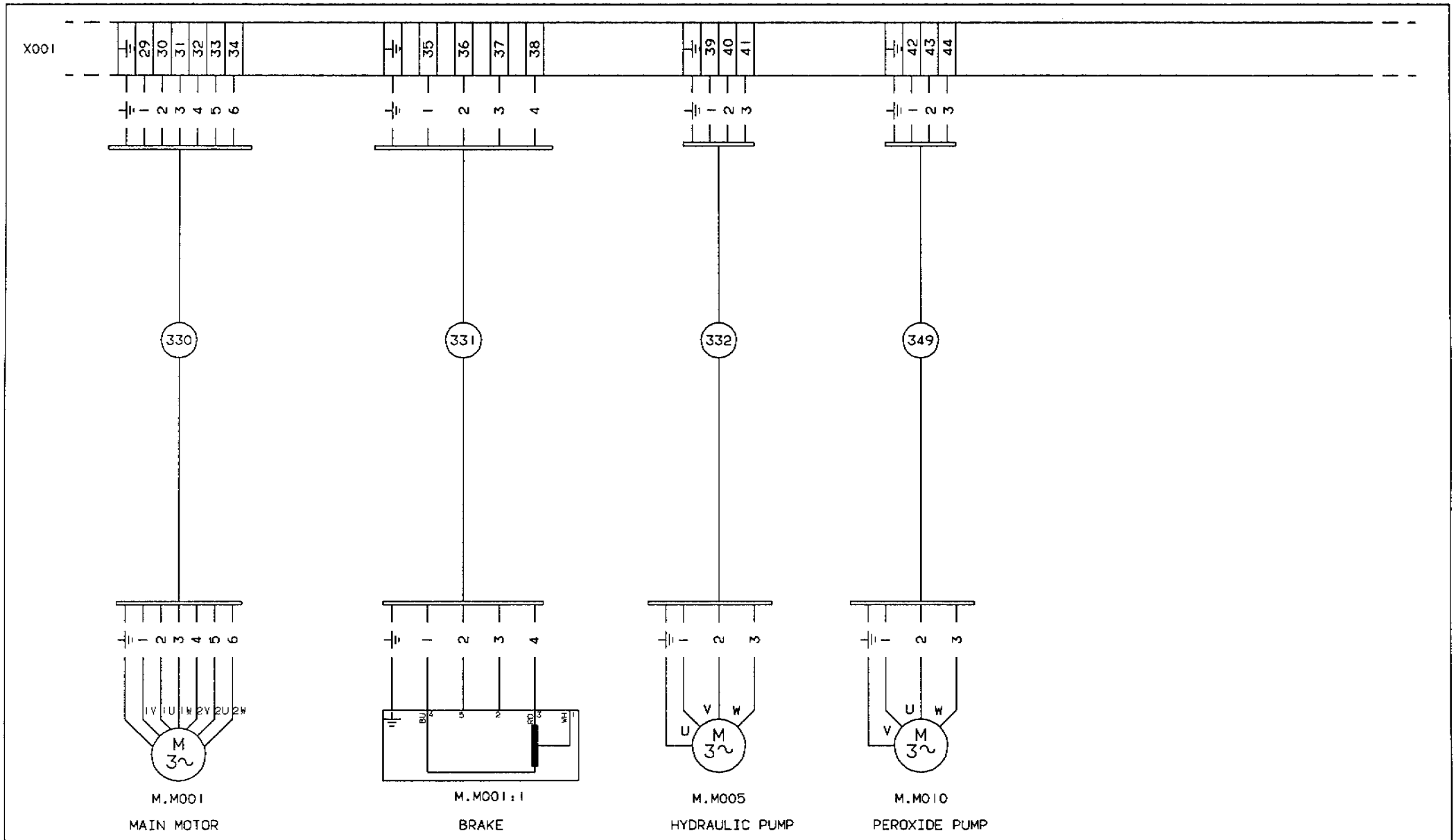

INTRODUCED WITH AM NO.	22843	DATE: 951128	SIGN. PGI		
ISSUE					
AM NO					
DATE					
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

DESCRIPTION: MOTORS

MACHINE: TBA/8-100V

61334-07:18

Tetra Pak
LUND SWEDEN

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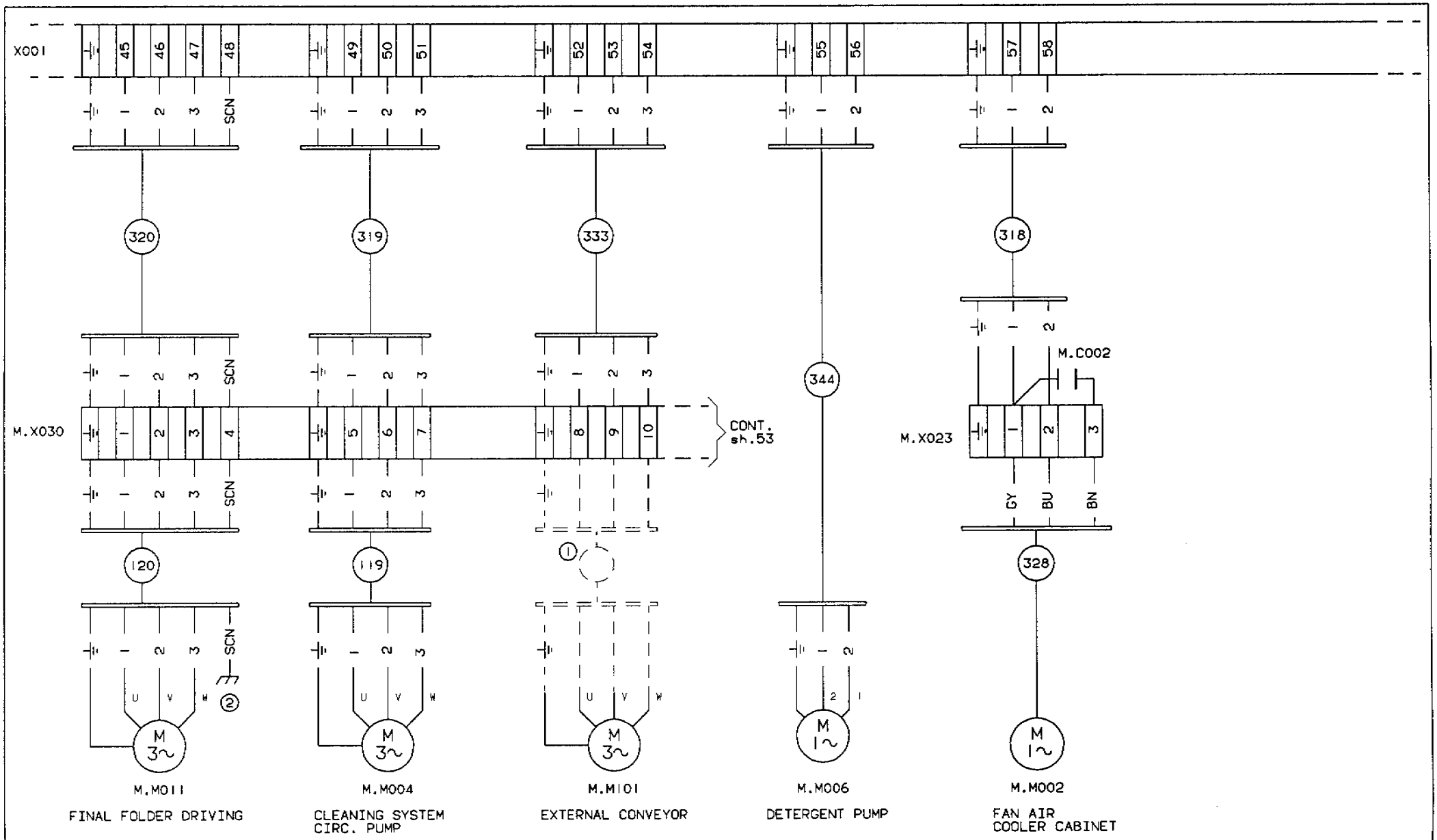

INTRODUCED WITH AM NO	22843	DATE: 951128	SIGN. PGI
ISSUE			
AM NO			
DATE			
SIGN.			

ALTERATIONS ONLY IN CADAM

① EXTRA EQUIPMENT
② MUST BE CONNECTED TO GROUND BY THE COMPRESSOR GLAND

DRAWING REMARKS

DESCRIPTION: MOTORS

MACHINE: TBA/8-100V

61334-08:18

Tetra Pak
LUND SWEDEN

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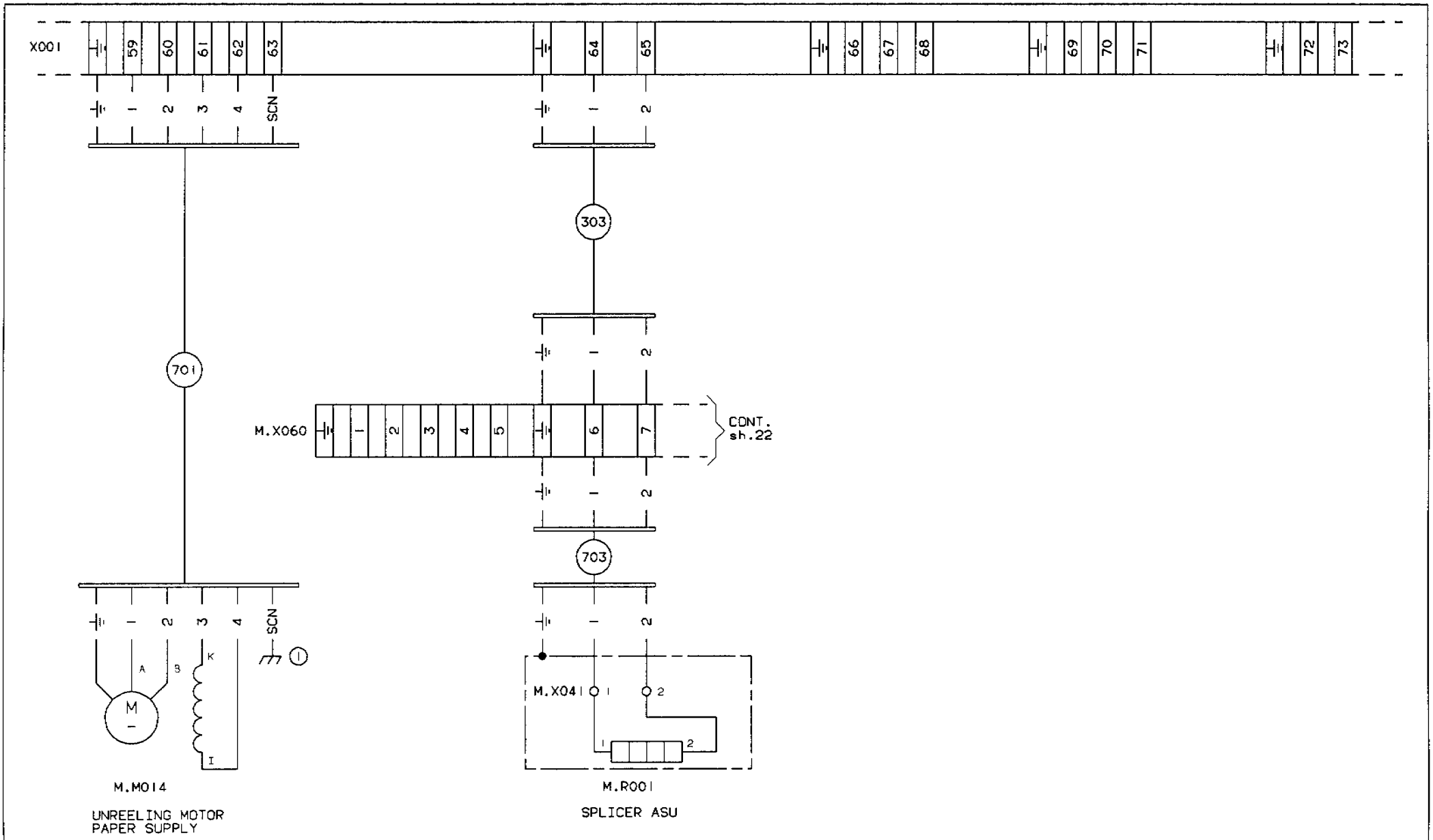

INTRODUCED WITH AM NO. 22843	DATE: 951128	SIGN: PGI	① MUST BE CONNECTED TO GROUND BY THE COMPRESSOR GLAND	DESCRIPTION: MOTORS, ELEMENT
195.K				
AM NO				MACHINE: TBA/8-100V
DATE				61334-09:18
SIGN			DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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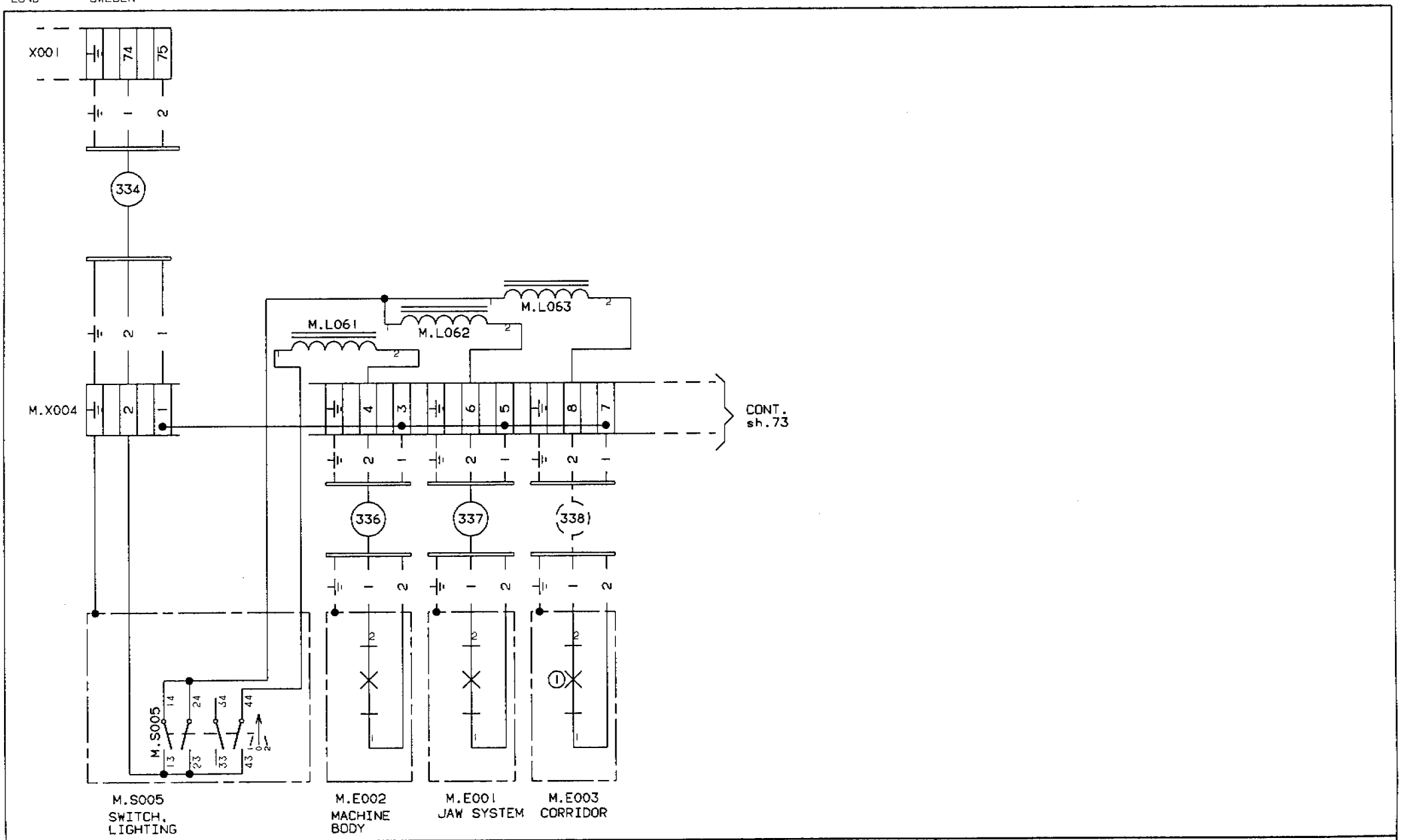

INTRODUCED WITH AM NO	22843	DATE: 951128	SIGN: PGI	① EXTRA EQUIPMENT	DESCRIPTION: LIGHTING
ISSUE					
AM NO.					MACHINE: TBA/8-100V
DATE					61334-10:18
SIGN				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

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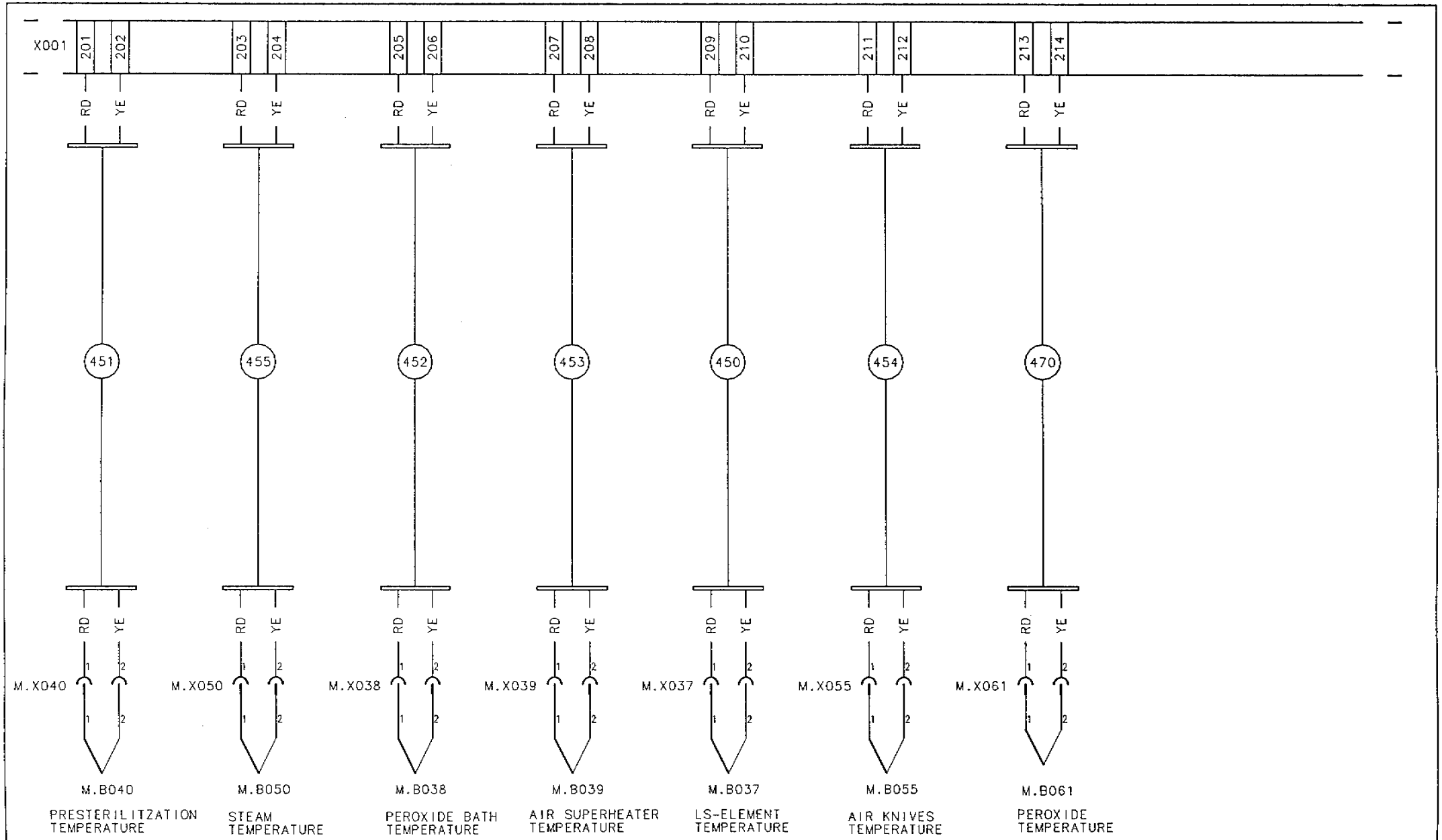

Note	A				
ECN No.	71972				
Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class –
Machine TBA/8-1000	Denomination THERMO ELEMENTS			
Drawing No 61334-20:50				Page –

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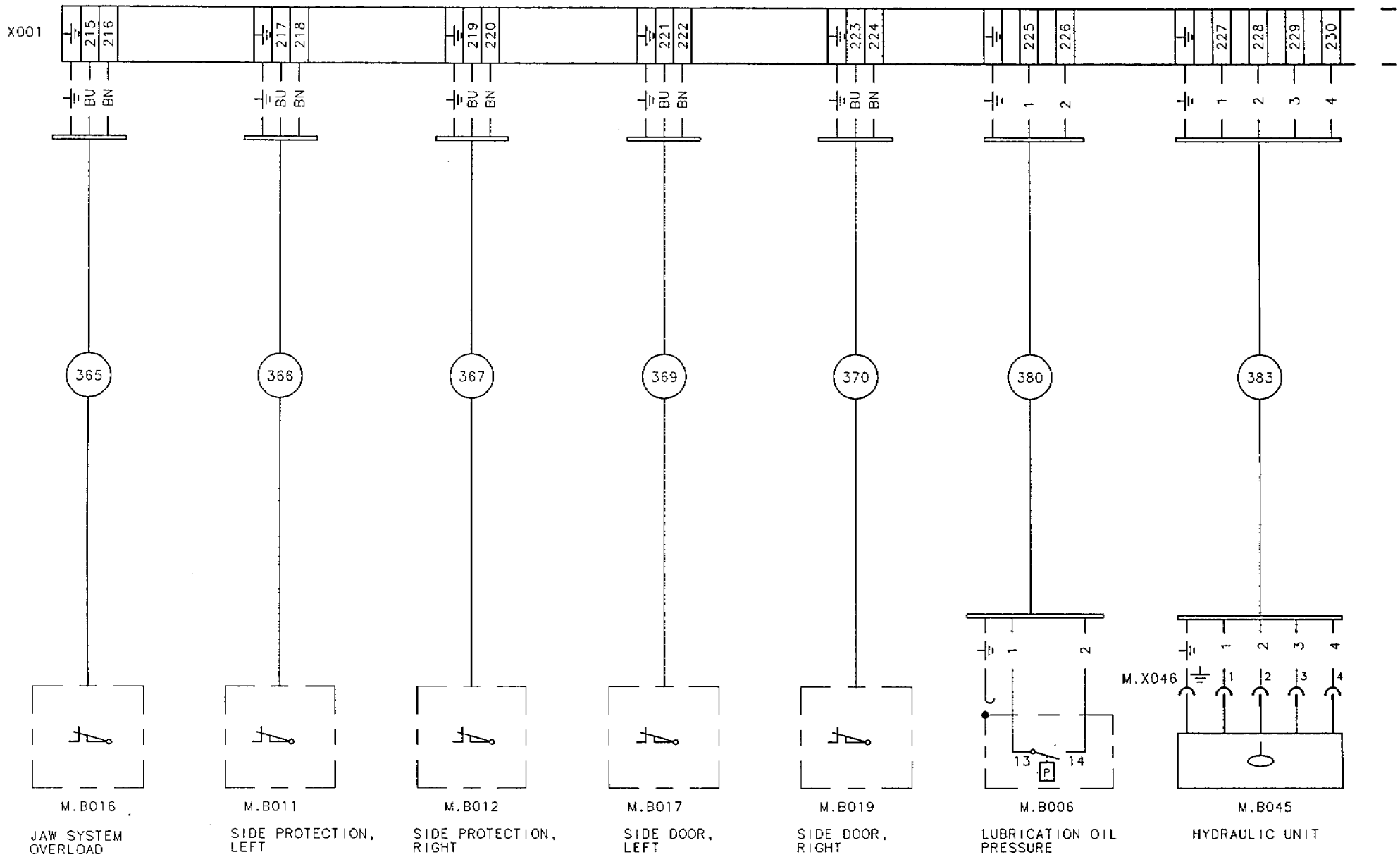

Note	A					Tetra Pak	Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class –
ECN No.	71972						Machine TBA/8-1000	Denomination GUARDS			
Sign./Date	DBI/981021						Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-21:50			Page –
Appr./Date	PGI/981021				Drawing remarks						

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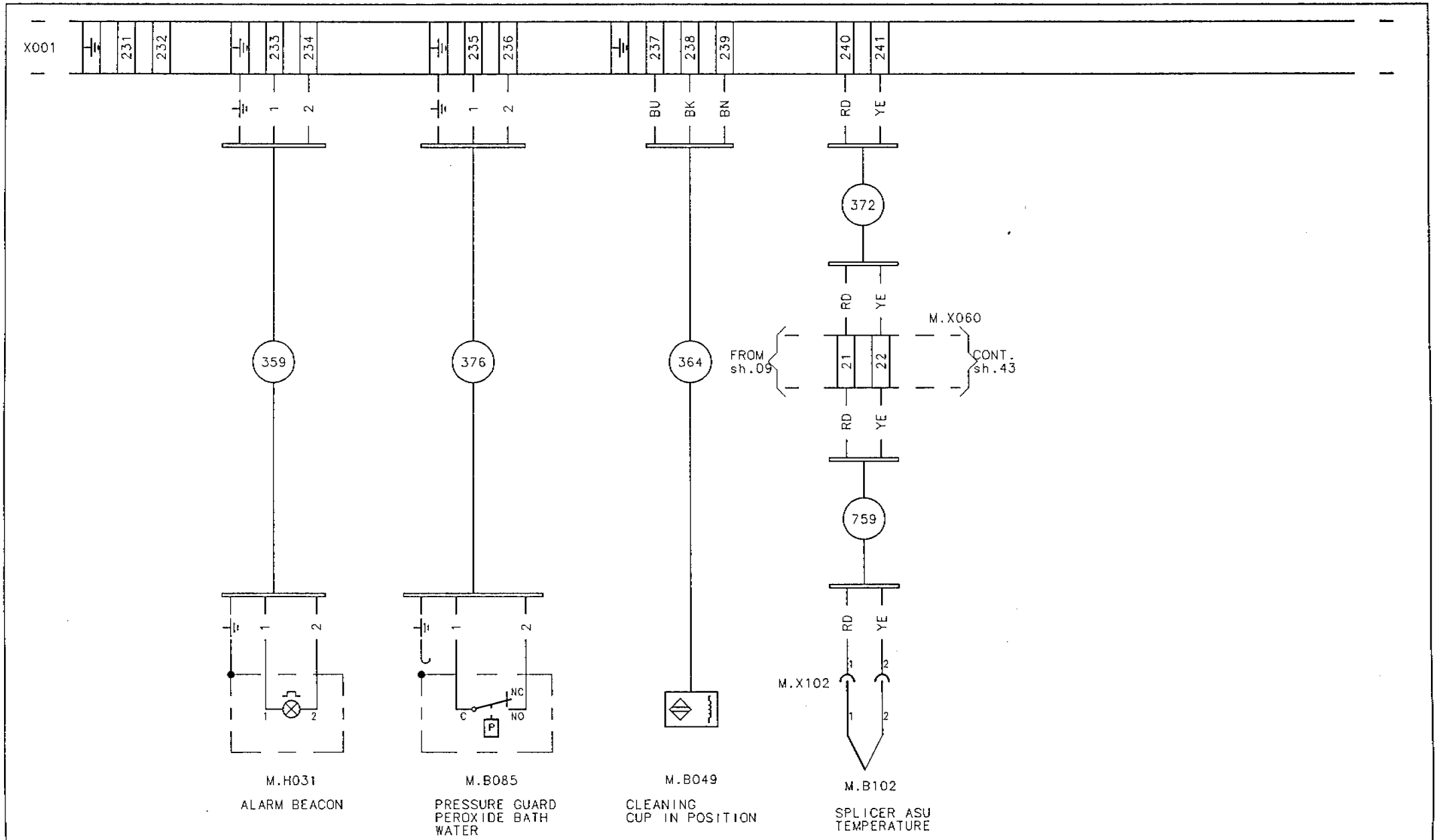

Note	A					Tetra Pak	Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class –
ECN No.	71972						Machine TBA/8-1000	Denomination BEACON			
Sign./Date	DBI/981021					Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-22:50				Page –
Appr./Date	PGI/981021				Drawing remarks						

Tetra Pak
LUND SWEDEN

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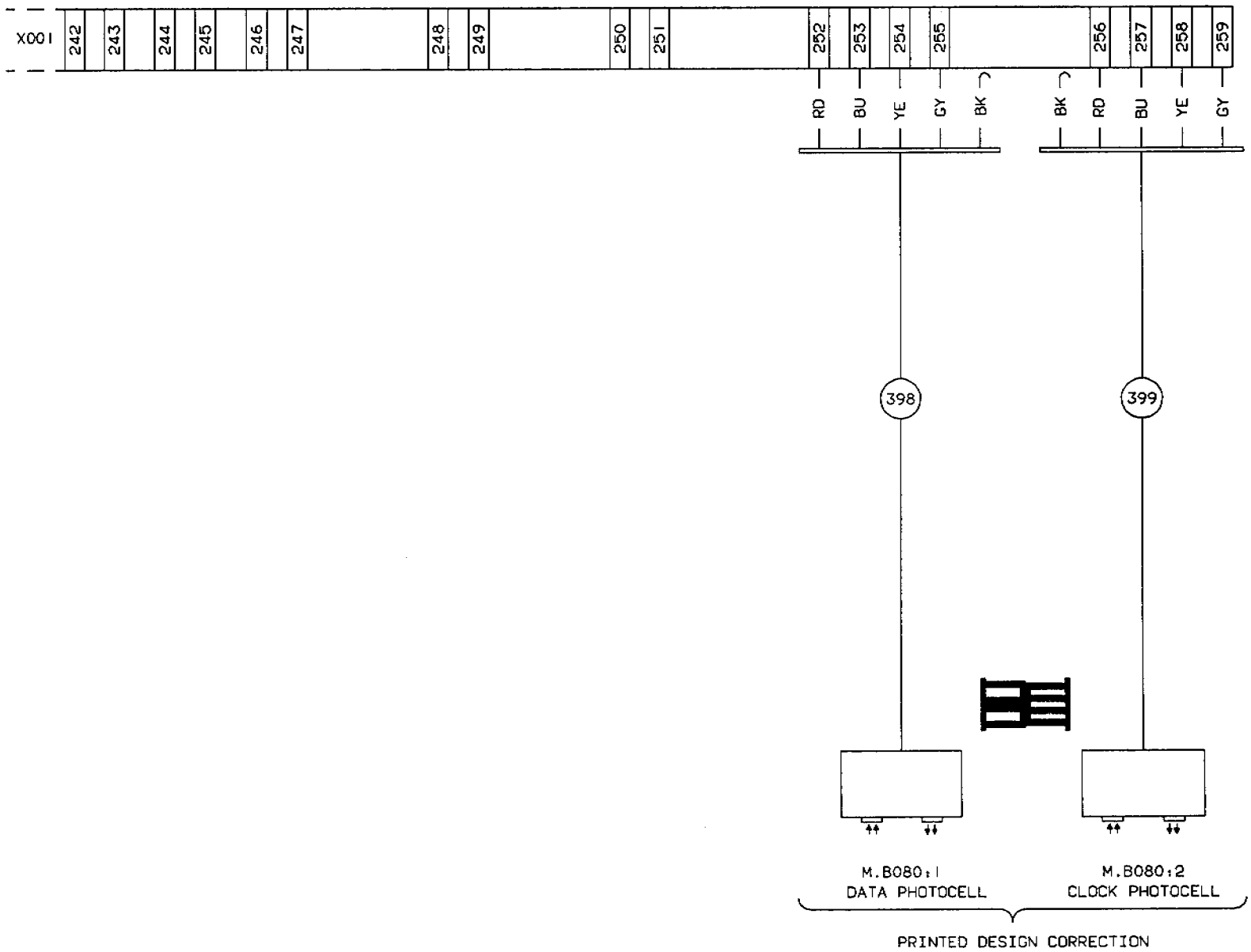

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN BWM/JAB			DESCRIPTION: PHOTOCELLS
ISSUE									
AM NO.									MACHINE: TBA/8-100V
DATE									61334-23:01
SIGN								DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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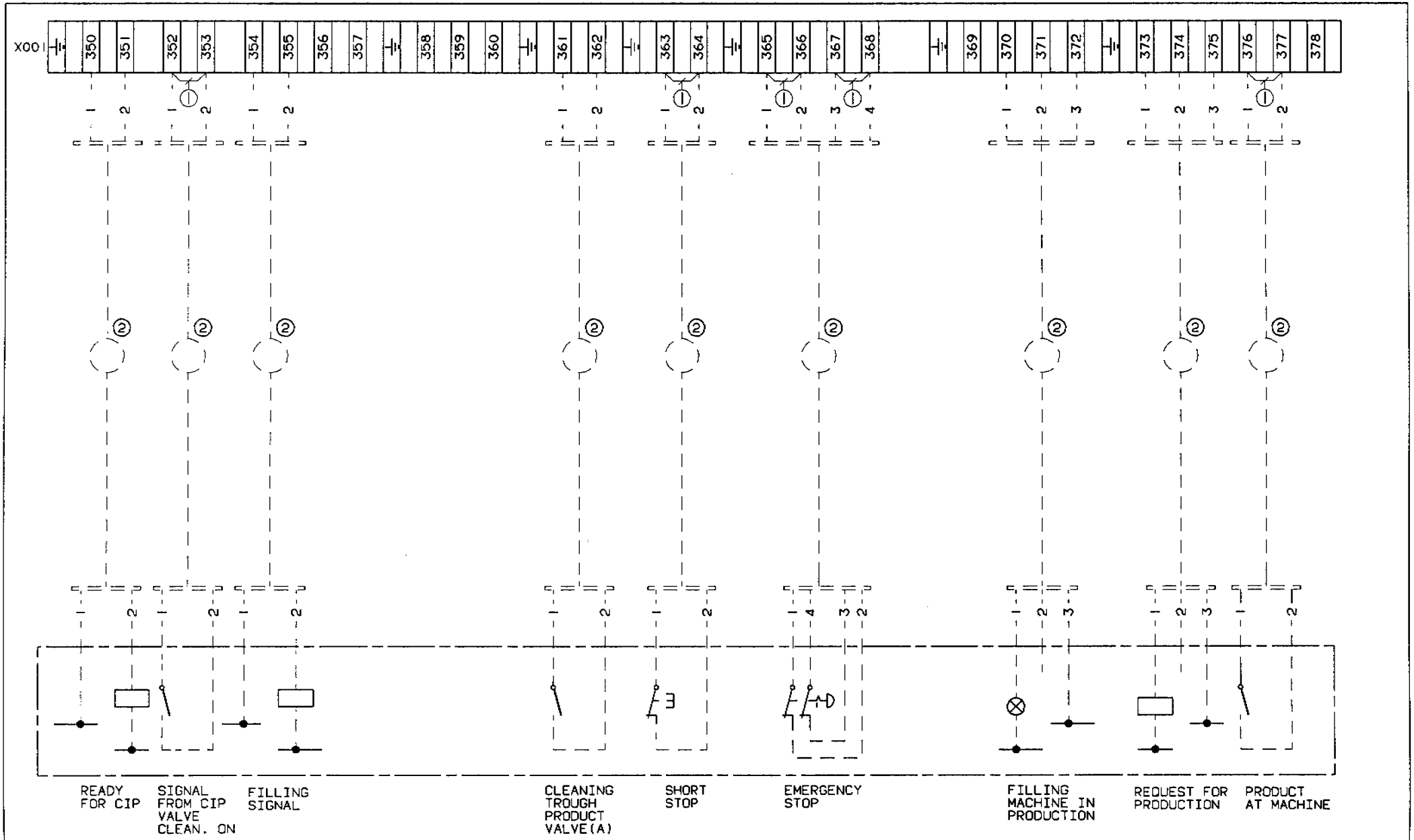

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JÅB
ISSUE	A		
AM NO.	20588		
DATE	941024		
SIGN	PSL		

① TO BE REMOVED WHEN PROCESS SIGNALS ARE AVAILABLE.
② EXTRA EQUIPMENT

DRAWING REMARKS

DESCRIPTION: PROCESS SIGNALS

MACHINE: TBA/8-100V

61334-28:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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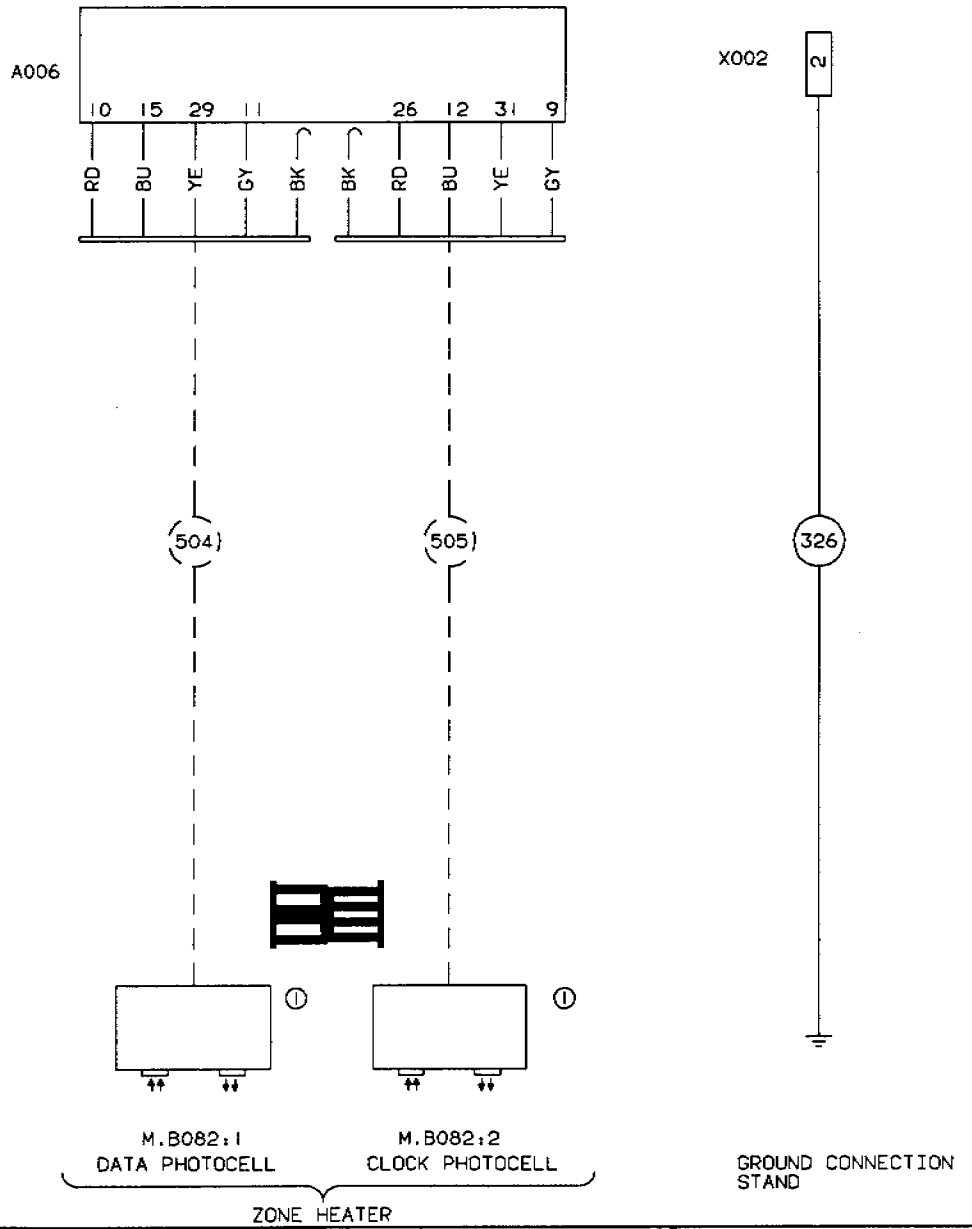

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN BWM/JAB	1 EXTRA EQUIPMENT	DESCRIPTION: ZONE HEATER, GROUND CONNECTION
ISSUE					
AM NO					MACHINE: TBA/8-100V
DATE					61334-32:01
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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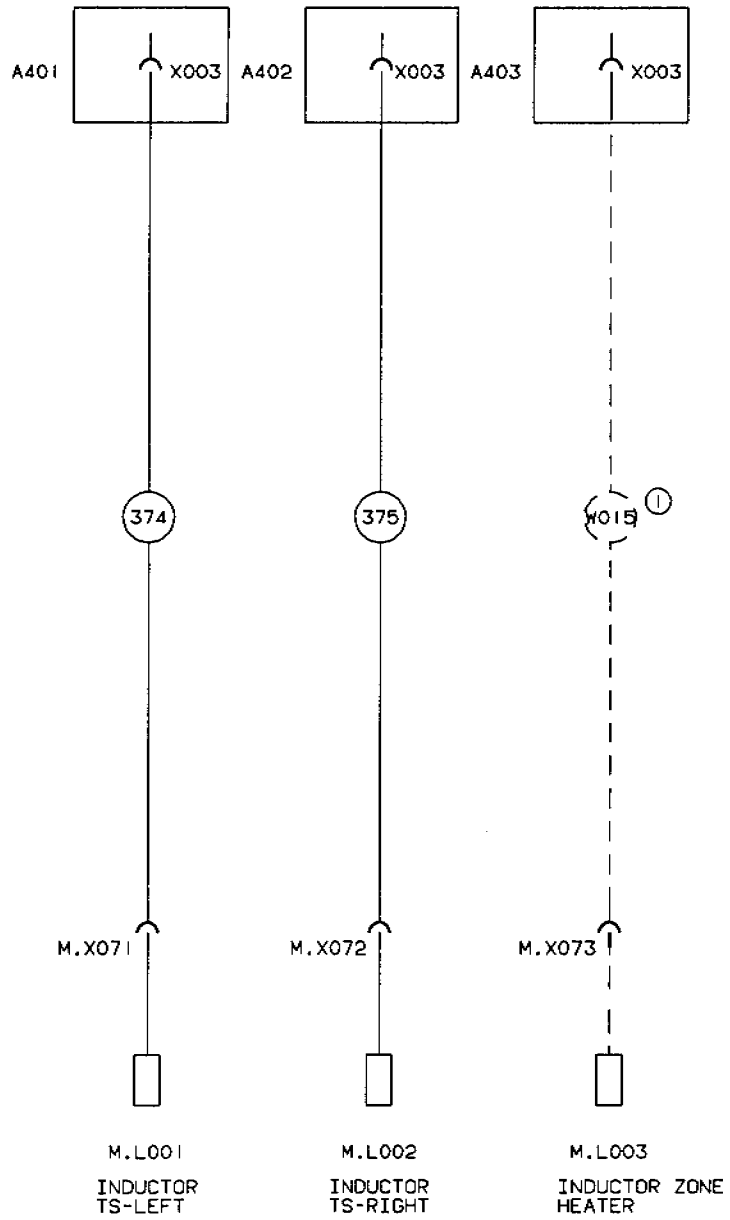

INTRODUCED WITH AM NO	19666			DATE: 930630		SIGN. BWM/JÅB		1 EXTRA EQUIPMENT
ISSUE								
AM NO.								
DATE								
SIGN								DRAWING REMARKS

DESCRIPTION: INDUCTORS

MACHINE: TBA/8-100V

61334-33:01

ALTERATIONS ONLY IN CADAM

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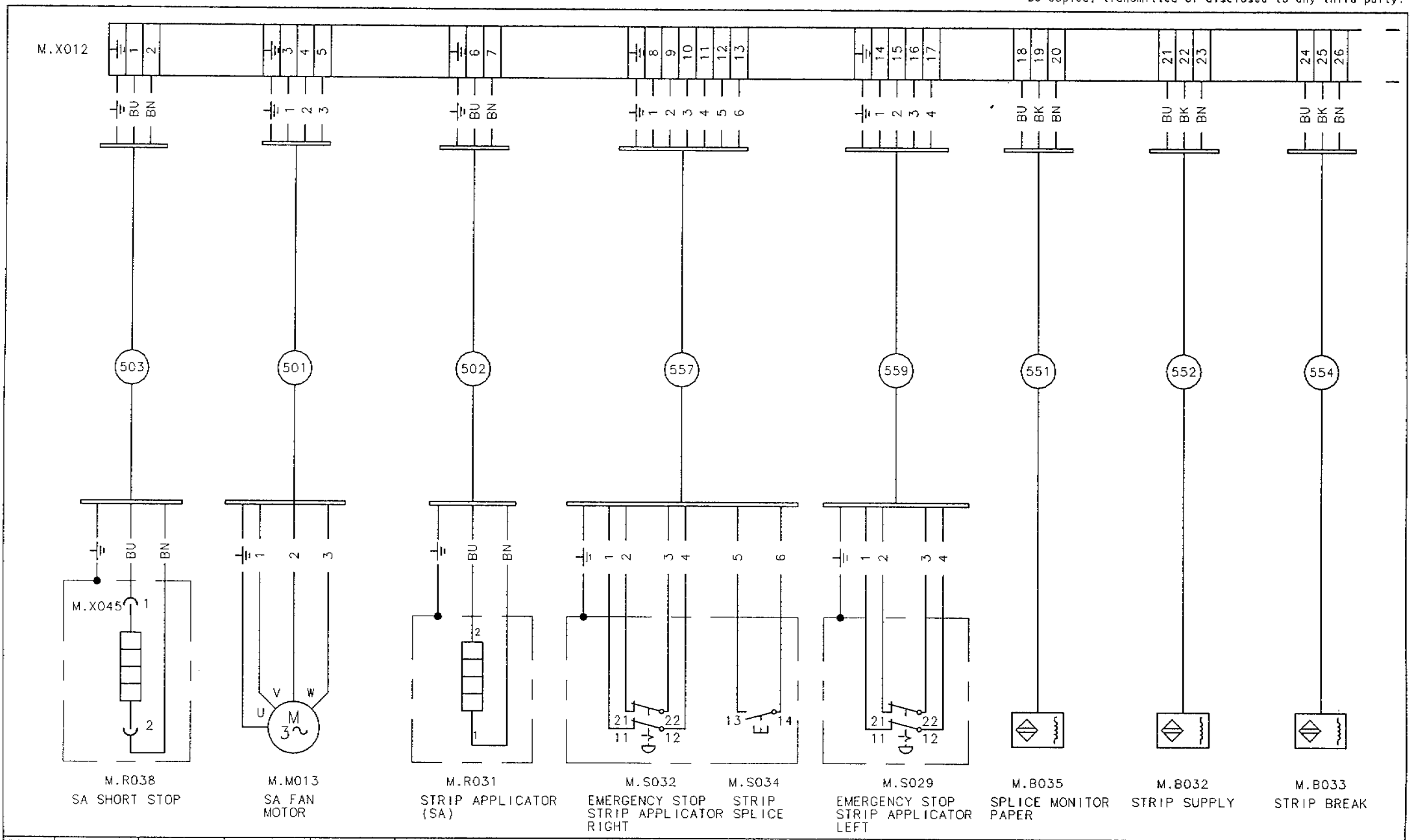

Note	A					Tetra Pak	Designer DBI	Date 970901	Approved DBI Date 970901	Doc. class –
ECN No.	71023						Machine TBA/8-1000	Denomination STRIP APPLICATOR		
Sign./Date	DBI/970901						Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-34:36		Page –
Appr./Date	DBI/970901				Drawing remarks					

Tetra Pak
LUND SWEDEN

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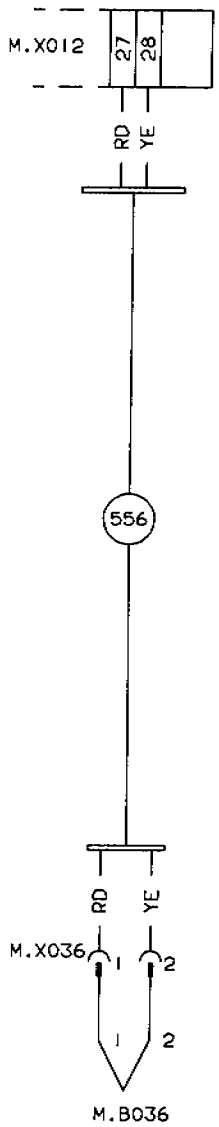

SA-ELEMENT
TEMPERATURE

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN. BWM/JÅB			
ISSUE									
AM NO.									
DATE									
SIGN.									

DRAWING REMARKS

DESCRIPTION: STRIP APPLICATOR

MACHINE: TBA/8-100V

61334-35:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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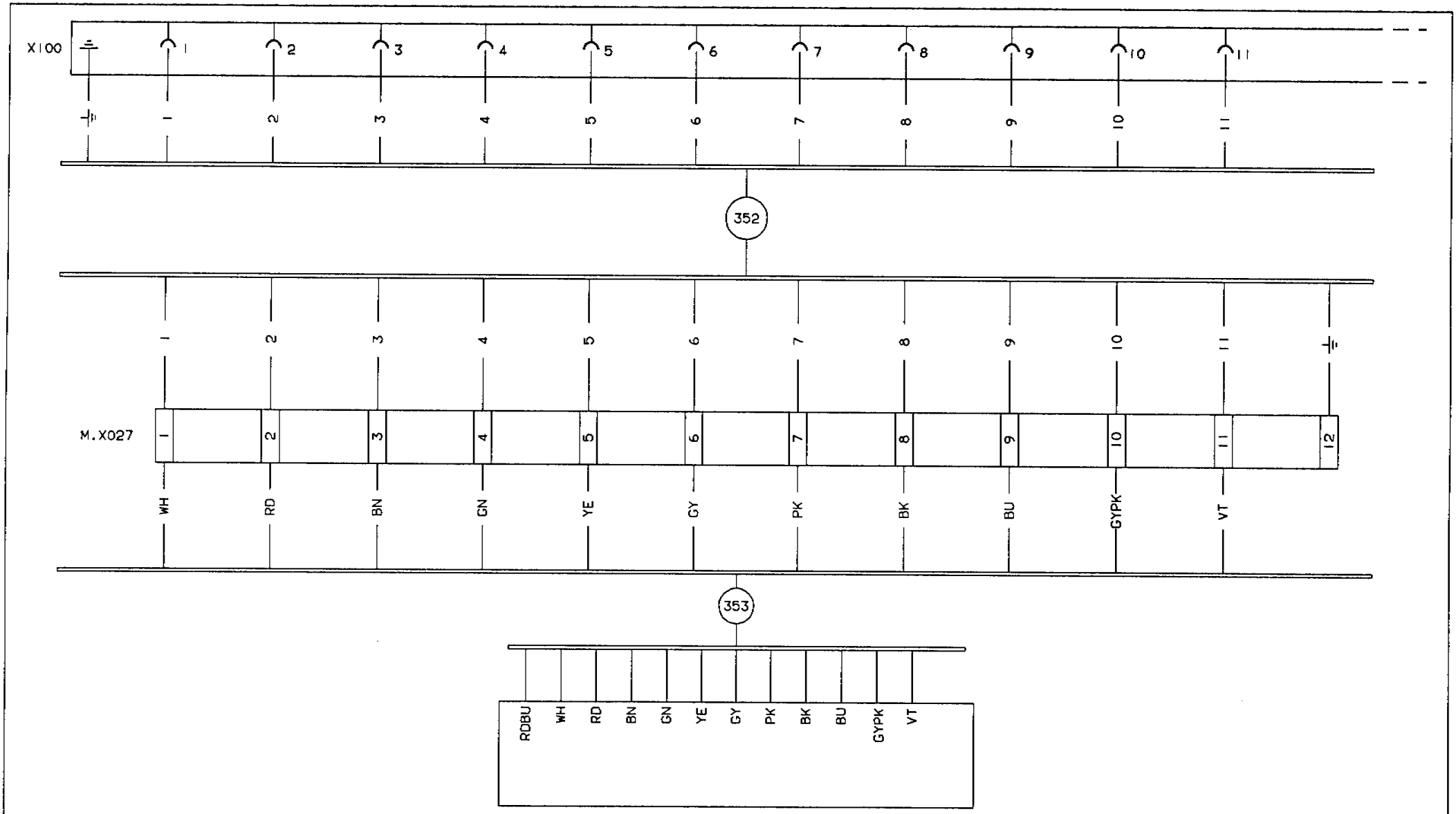

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN: BWM/JAB				
ISSUE	A						
AM NO	20127						
DATE	940301						
SIGN	PSL/APO						

DRAWING REMARKS

DESCRIPTION: ANGLE ENCODER

MACHINE: TBA/8-100V

61334-40:01

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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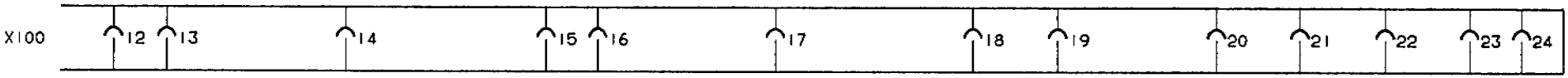

INTRODUCED WITH AM NO.	19666			DATE 930630		SIGN. BWM/JÅB				DESCRIPTION: ANGLE ENCODER		
ISSUE												
AM NO.												
DATE										MACHINE: TBA/8-100V		61334-41:01
SIGN.									DRAWING REMARKS			

ALTERATIONS ONLY IN CADAM

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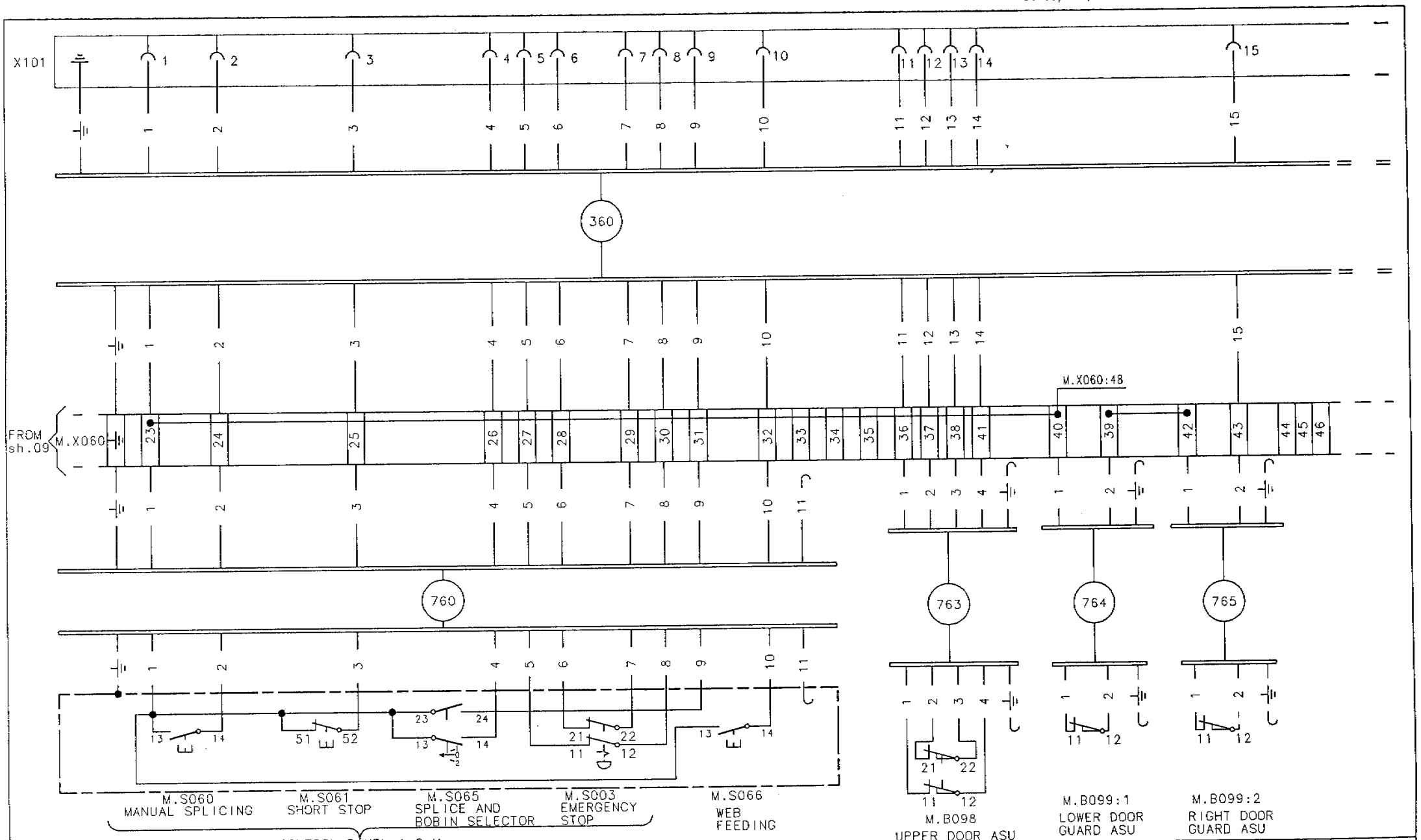

Note	A				
ECN No.	71424				
Sign./Date	RAI/980309				
Appr./Date	PGI/980309				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer: RAI | Date: 980309 | Approved: PGI | Date: 980309 | Doc. class: –

Machine: TBA/8-1000

Denomination: AUTOMATIC SPLICING UNIT

Drawing No: 61334-43:43

Page: –

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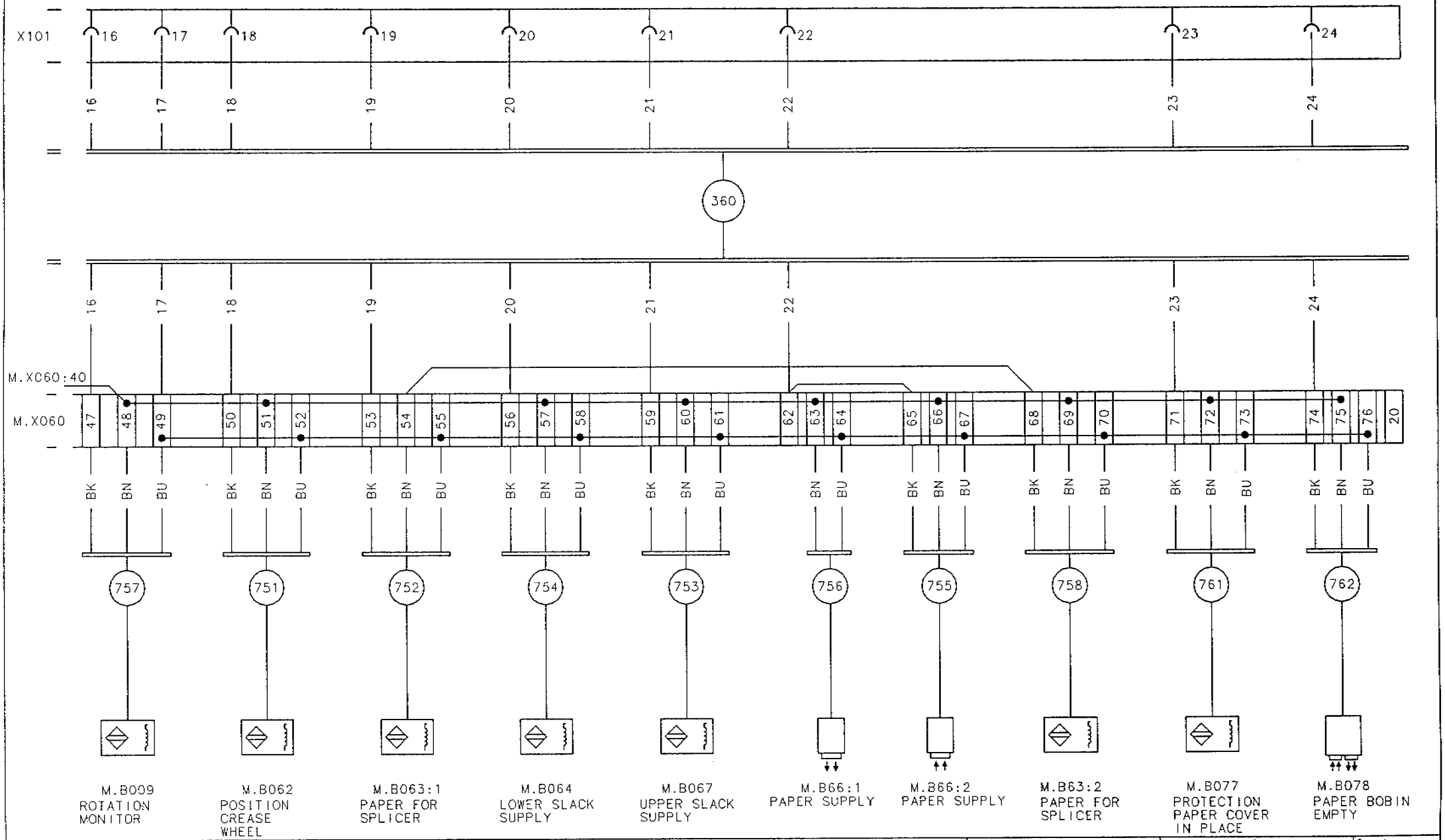

Note	A				Tetra Pak	Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class –	
ECN No.	71424					Machine TBA/8-1000	Denomination AUTOMATIC SPLICING UNIT				
Sign./Date	RAI/980309				Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-44:43				Page –	
Appr./Date	PGI/980309				Drawing remarks						

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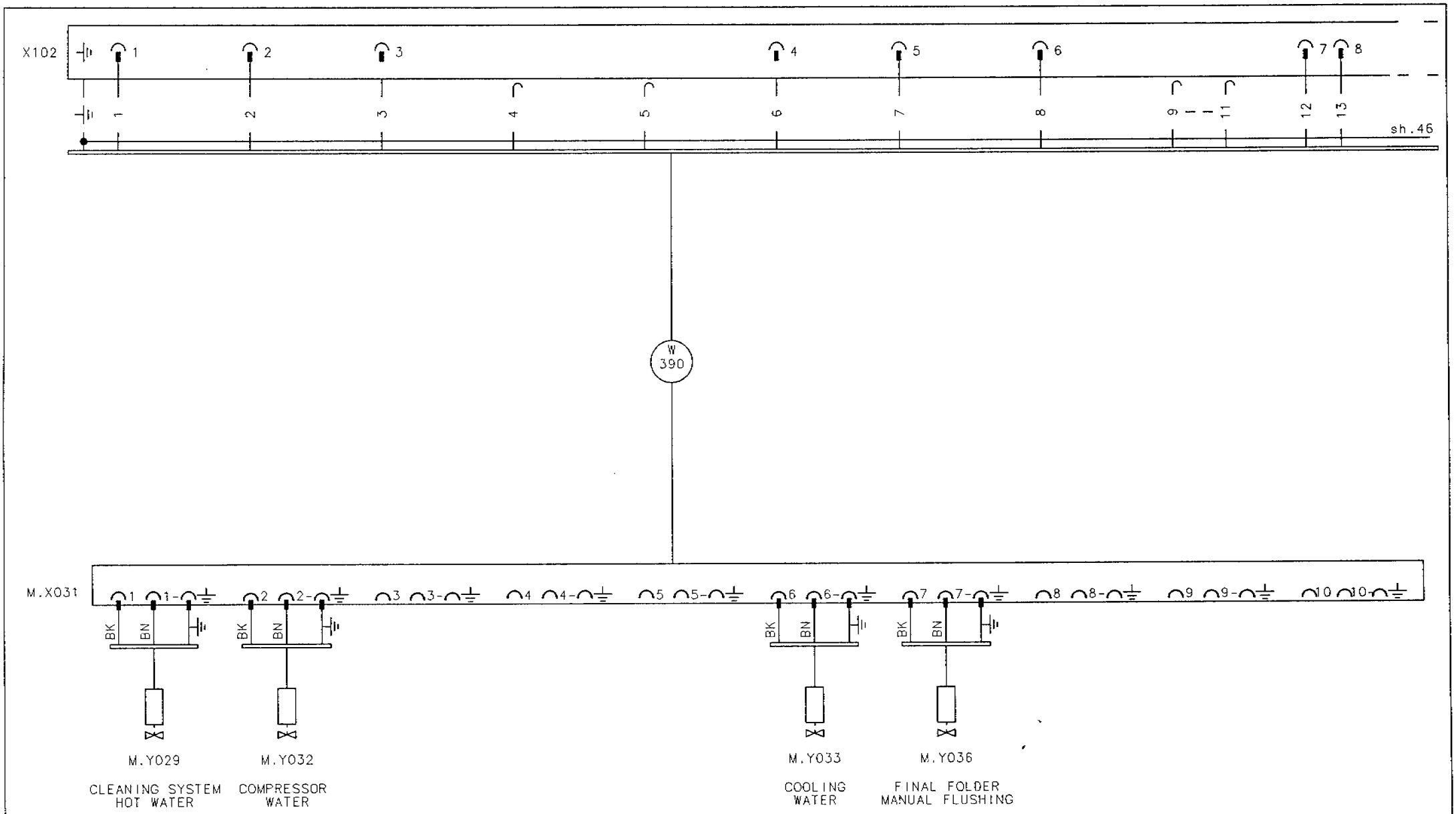


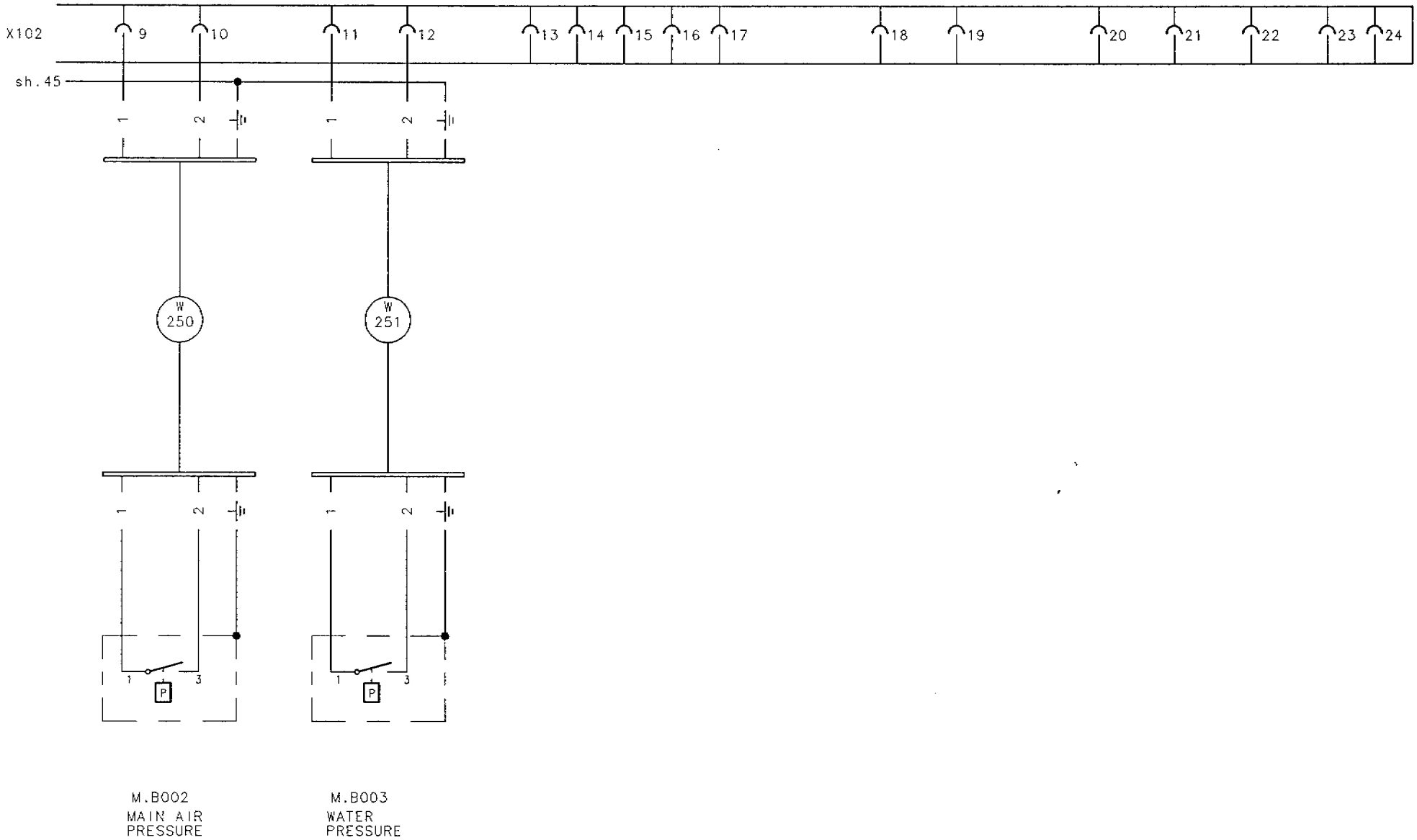
note	A				
ECN No.	71424				
Sign./Date	RAI/980309				
Appr./Date	PGI/980309				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer RAI	Date 980309	Approved PGI	Date 980309	Dec. class –
Machine TBA/8-1000	Denomination LOWER VALVE PANEL			
Drawing No 61334-45:43				Page –

This drawing must not without the consent of Tetra Pak:
be copied, transmitted or disclosed to any third party.



hole	A				
ECN No.	71424				
Sign./Date	RAI/980309				
Appr./Date	PGI/980309				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer RAI | Date 980309 | Approved PGI | Date 980309 | Doc. class –

Machine: TBA/8-1000

Denomination: LOWER VALVE PANEL

Drawing No: 61334-46:43

Page: –

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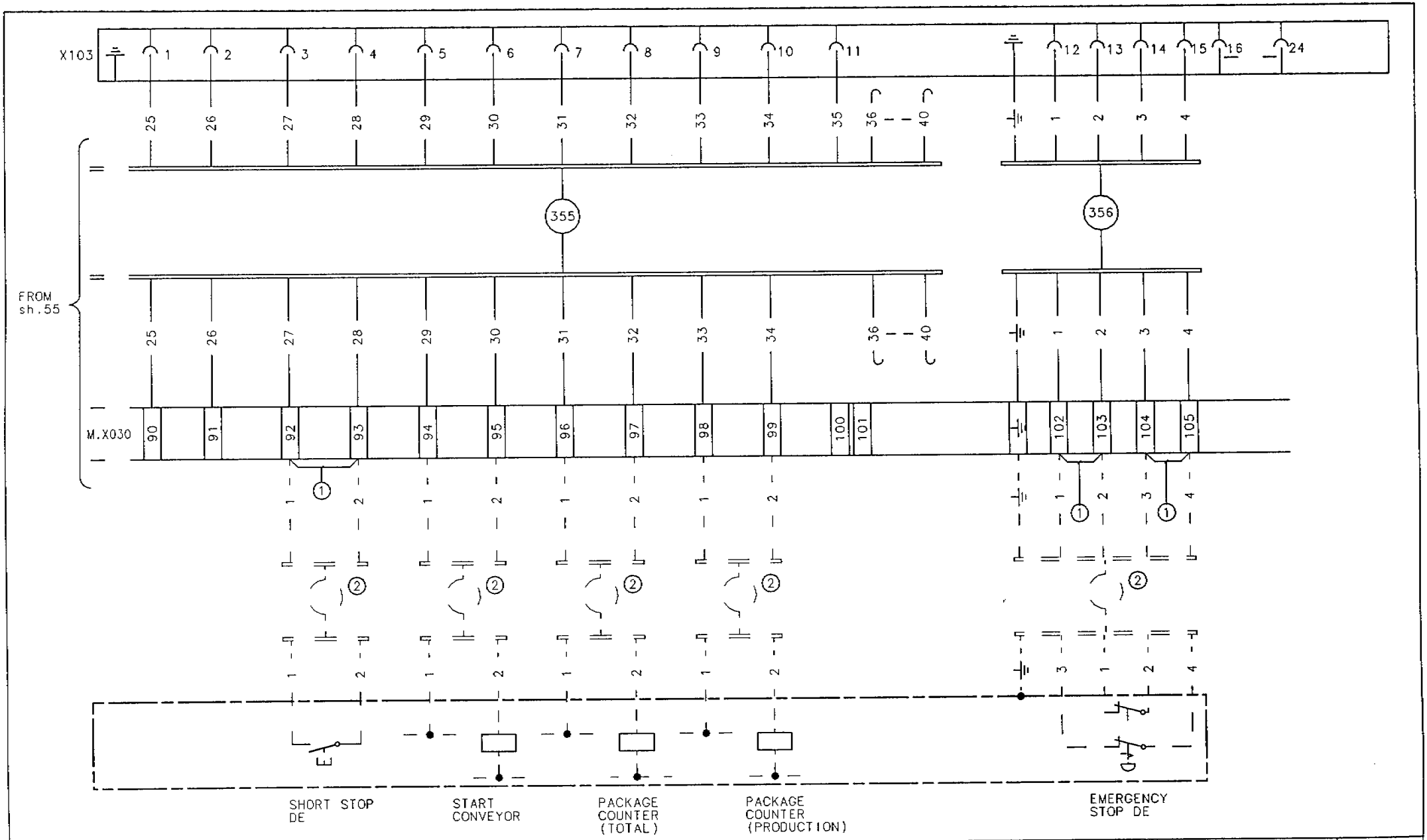

Note	A				① TO BE REMOVED WHEN DE-SIGNALS ARE AVAILABLE.	Tetra Pak	Designer DBI	Date 981021	Approved PGI Date 981021	Doc. class –
ECN No.	71972				② EXTRA EQUIPMENT		Machine TBA/8-1000	Denomination FINAL FOLDER UNIT		
Sign./Date	DBI/981021				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 61334-49:50		Page –
Appr./Date	PGI/981021									

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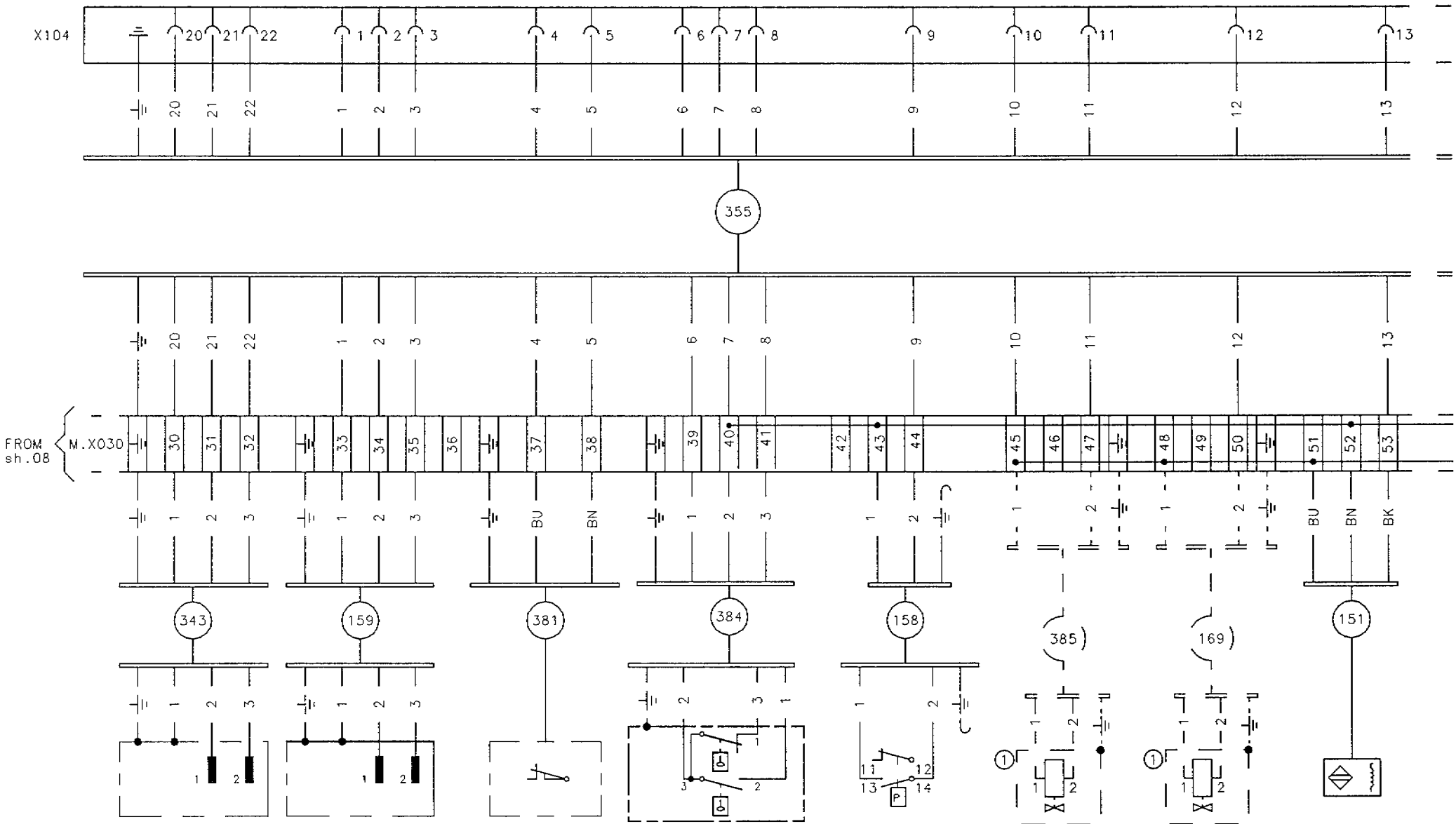
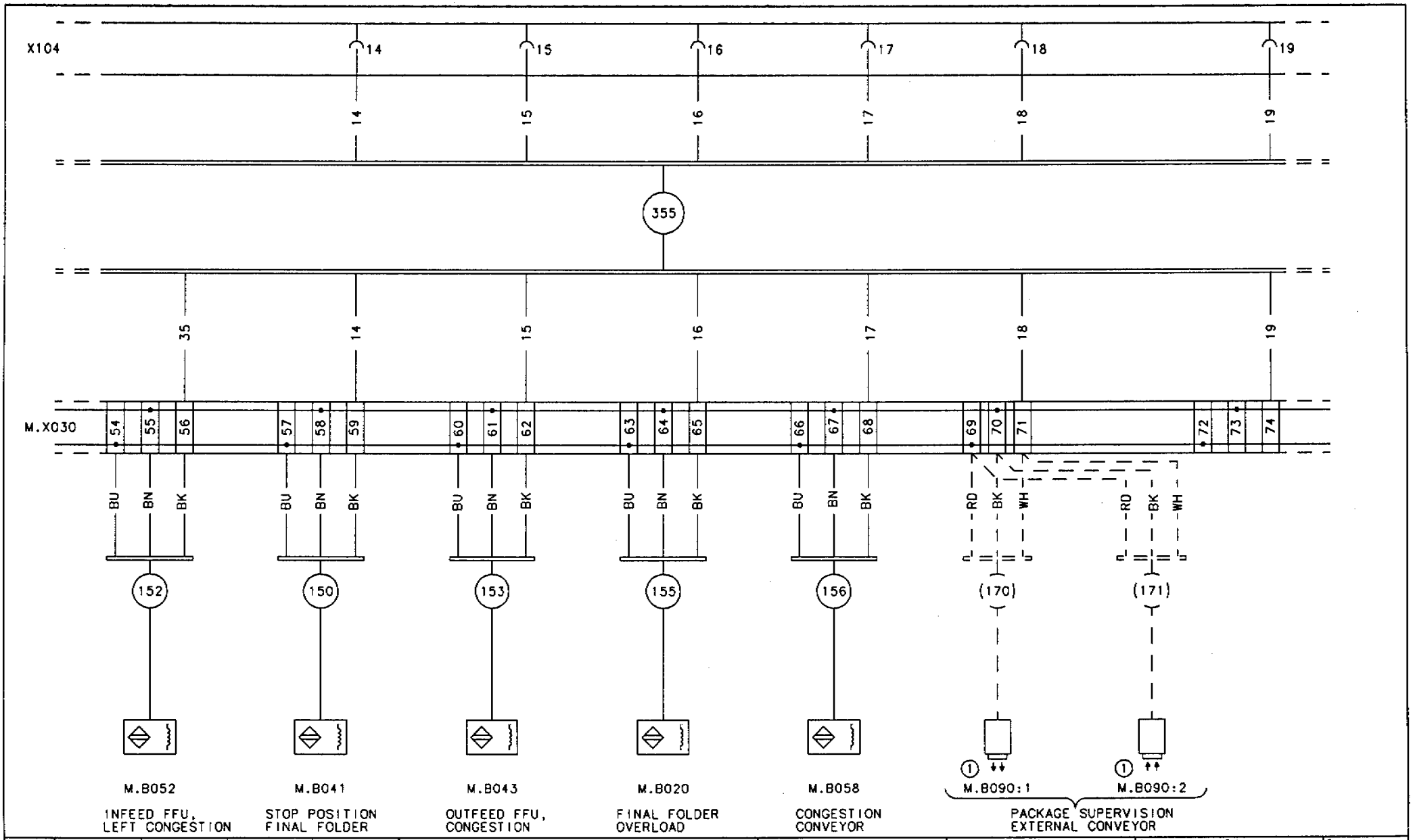


Note	A				(1) EXTRA EQUIPMENT	Tetra Pak	Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class –
ECN No.	71424						Machine TBA/8-1000	Denomination FINAL FOLDER UNIT		
Sign./Date	RAI/980309					Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-53:43			Page –
Appr./Date	PGI/980309				Drawing remarks					

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



Note	A				1 EXTRA EQUIPMENT
ECN No.	70684				
Sign./Date	FRM/970314				
Appr./Date	FRM/970314				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM	Date 970314	Approved FRM	Date 970314	Doc. class –
Machine TBA/8-1000	Denomination FINAL FOLDER UNIT			
Drawing No 61334-54:30				Page –

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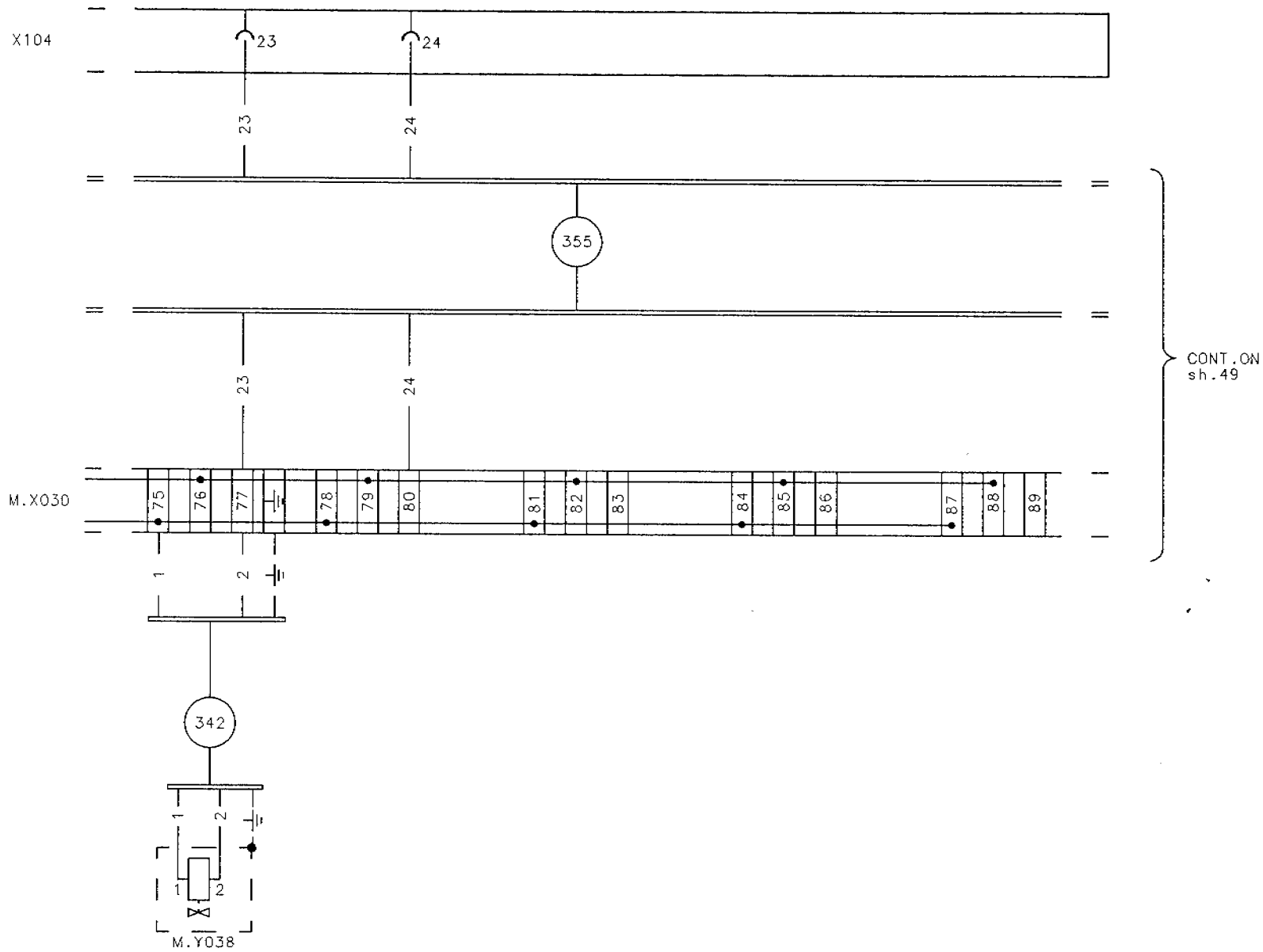
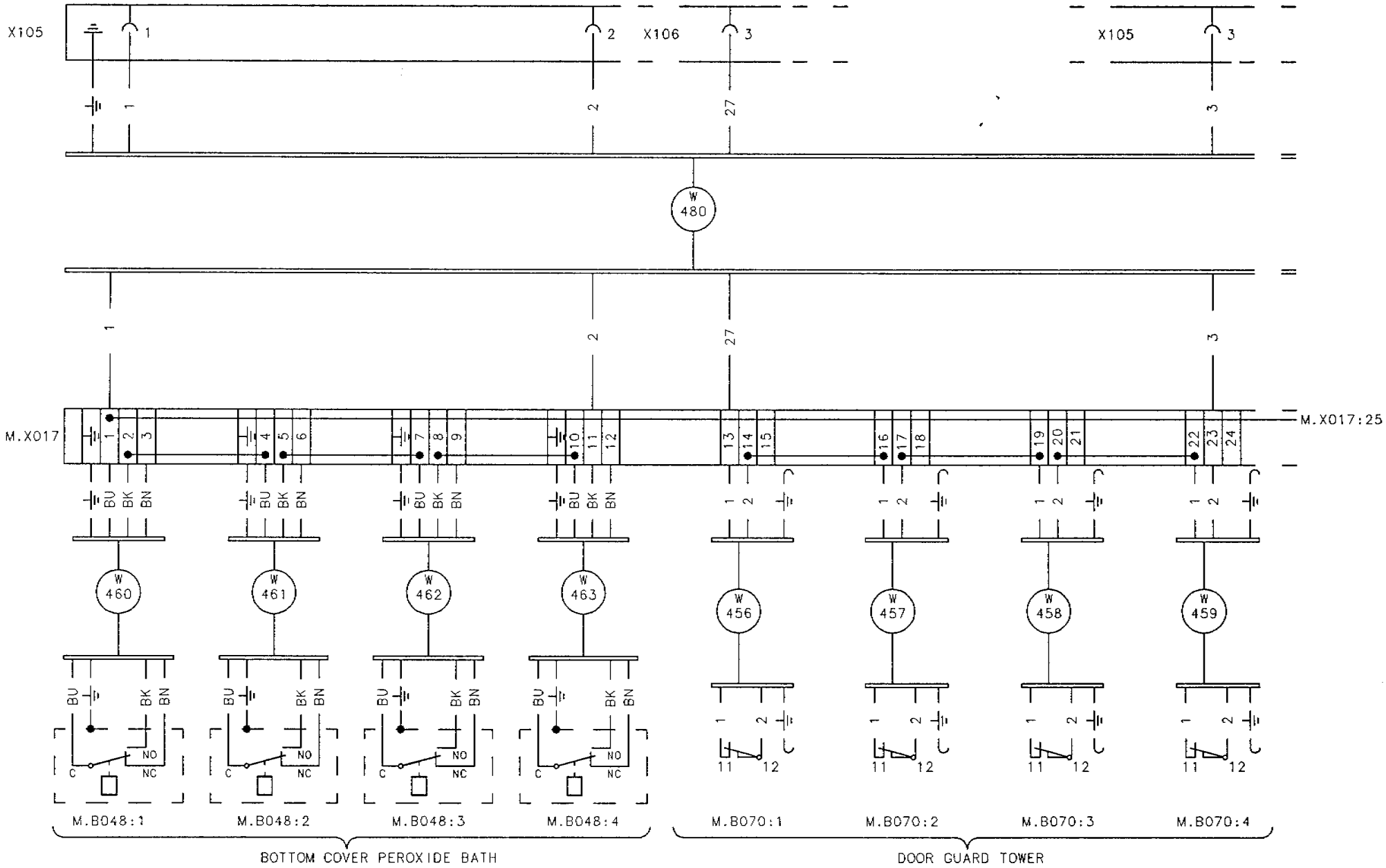


REFILLING HYDROGEN
PEROXIDE TANK

Note	A					Tetra Pak	Designer RAI	Date 980309	Approved PGI	Date 980309	Doc. class –
ECN No.	71424						Machine TBA/8-1000	Denomination FINAL FOLDER UNIT			
Sign./Date	RAI/980309										
Appr./Date	PGI/980309				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 61334-55:43			Page –

This drawing must not without the consent of Tetra Pak: be copied, transmitted or disclosed to any third party.



Note	A					Tetra Pak	Designer RAI	Date 980309	Approved PGI	Date 980309	Dec. class –
ECN No.	71424						Machine TBA/8-1000	Denomination TOWER		
Sign./Date	RAI/980309					Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-57:43			Page –
Appr./Date	PGI/980309				Drawing remarks					

Tetra Pak
LUND SWEDEN

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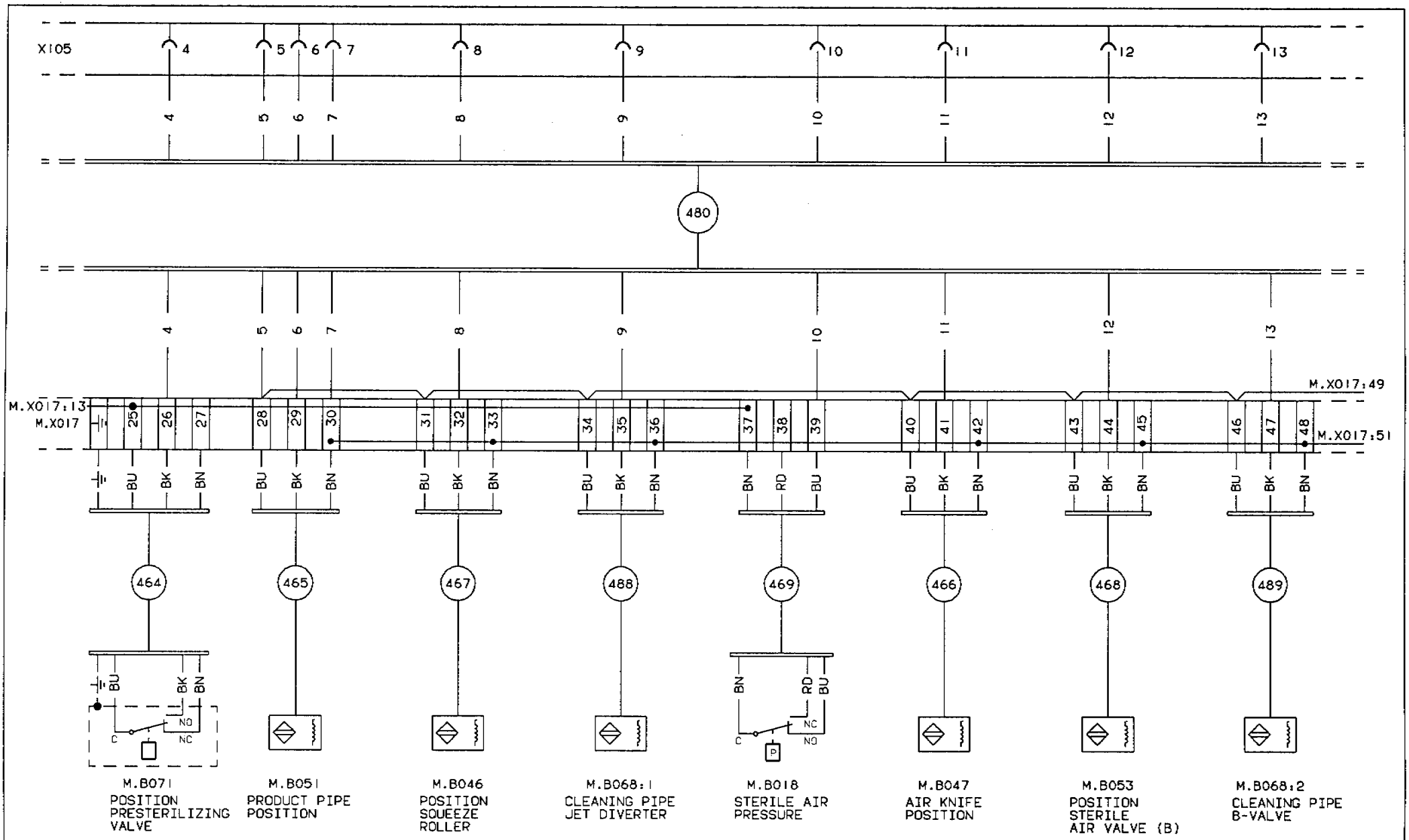

INTRODUCED WITH AM NO.	19666	DATE: 930630	SIGN. BWM/JAB		
ISSUE	A				
AM NO.	20127				
DATE	940117				
SIGN.	PSL/APO			DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

DESCRIPTION: TOWER

MACHINE: TBA/8-100V

61334-58:01

Tetra Pak
LUND SWEDEN

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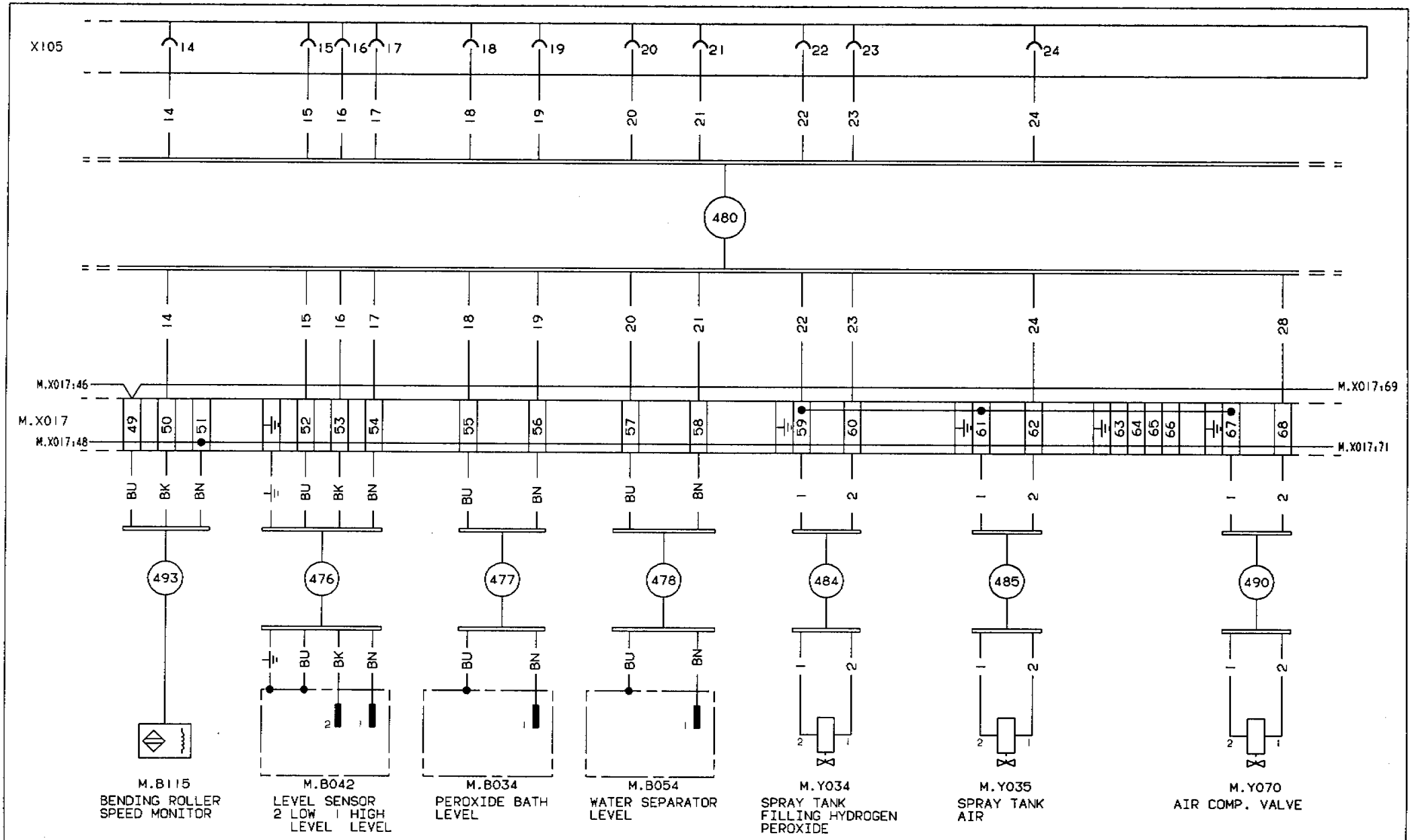

INTRODUCED WITH AM NO	19666		DATE: 930630	SIGN. BWM/JÅB				
ISSUE	A	B						
AM NO	20127	20588						
DATE	940117	941024						
SIGN	PSL/APO	PSL						

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: TOWER

MACHINE: TBA/8-100V

61334-59:01

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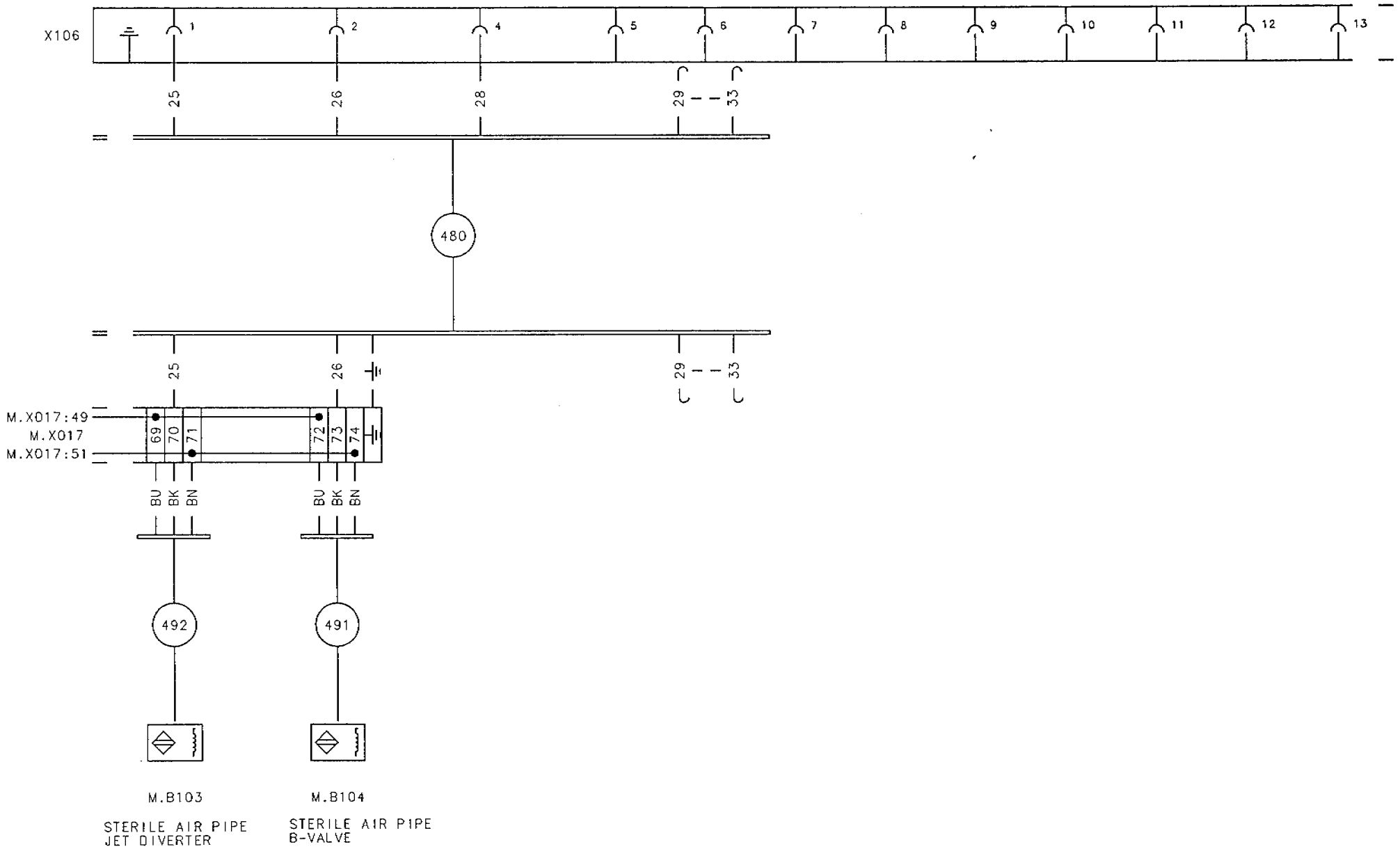

Note	A				
ECN No.	71972				
Sign./Date	DBI/981021				
Appr./Date	PGI/981021				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 981021	Approved PGI	Date 981021	Doc. class –
Machine TBA/8-1000	Denomination TOWER			
Drawing No 61334-60:50				Page –

Tetra Pak
LUND SWEDEN

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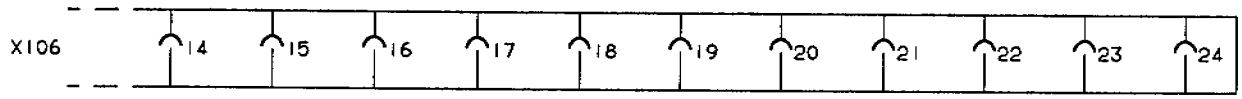

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN. BWM/JÅB				DESCRIPTION: TOWER	
ISSUE											
AM NO.											
DATE										MACHINE: TBA/8-100V	61334-61:01
SIGN.									DRAWING REMARKS		

ALTERATIONS ONLY IN CADAM

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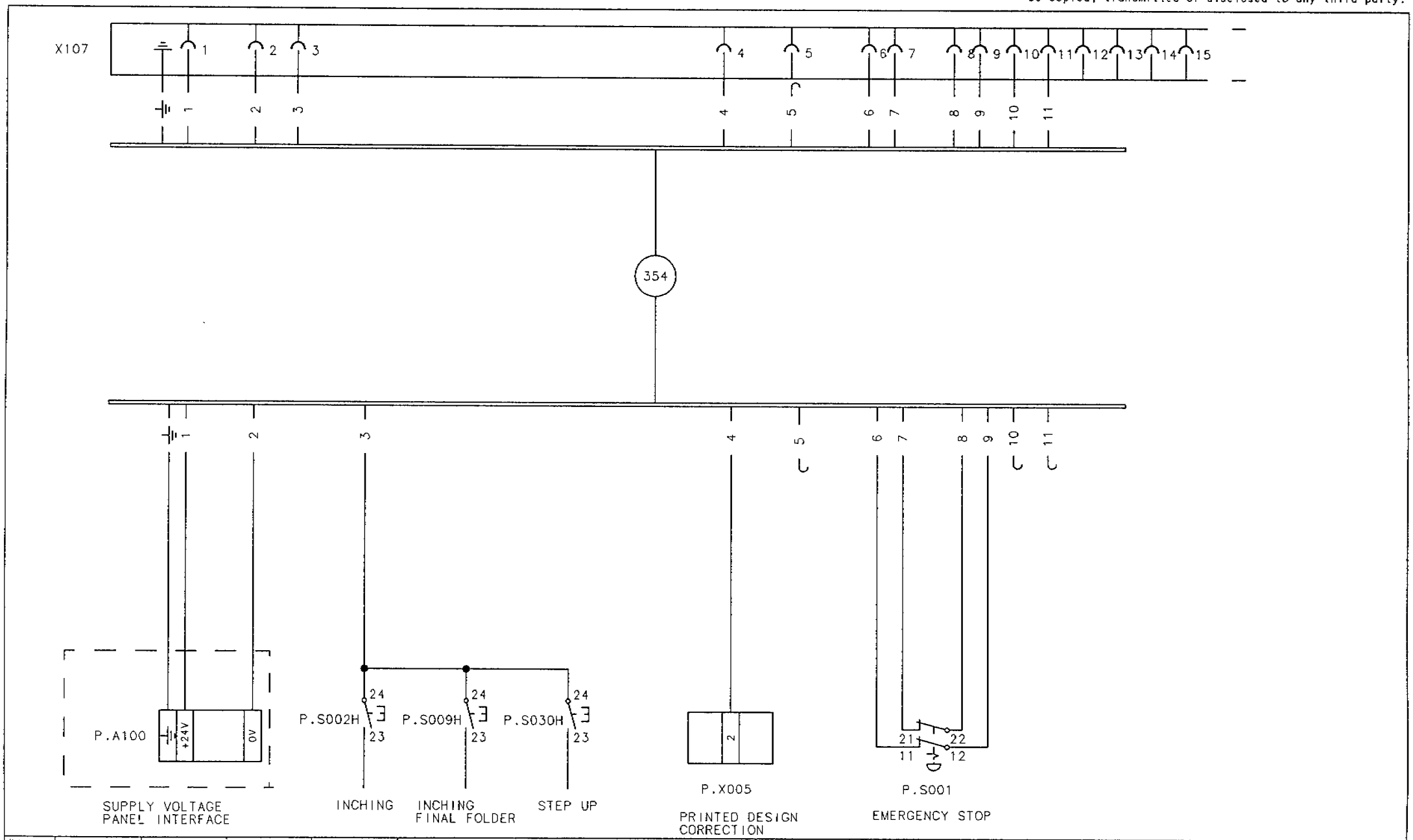

Note	A				① FOR INTERNAL USE	Tetra Pak	Designer DBI	Date 971030	Approved PGI	Date 971030	Doc. class –
ECN No.	71182						Machine TBA/8-1000	Denomination CONTROL PANEL		
Sign./Date	DBI/971030						Company Tetra Brik R.& D. S.p.A.	Drawing No 61334-65:37		Page –
Appr./Date	PGI/971030				Drawing remarks					

Tetra Pak
LUND SWEDEN

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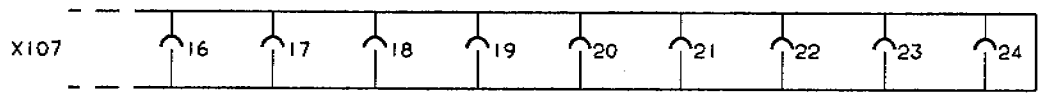

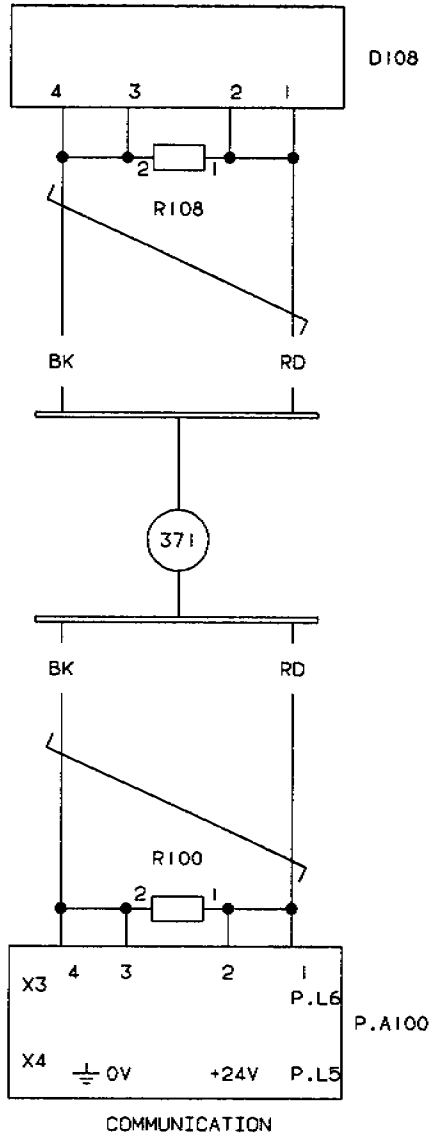

INTRODUCED WITH AM NO.	19666		DATE 930630		SIGN. BWM/JÅB				
ISSUE	A								
AM NO	20127								
DATE	940303								
SIGN.	PSL/APO								DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: CONTROL PANEL

MACHINE: TBA/8-100V

61334-66:01

Tetra Pak
LUND SWEDEN

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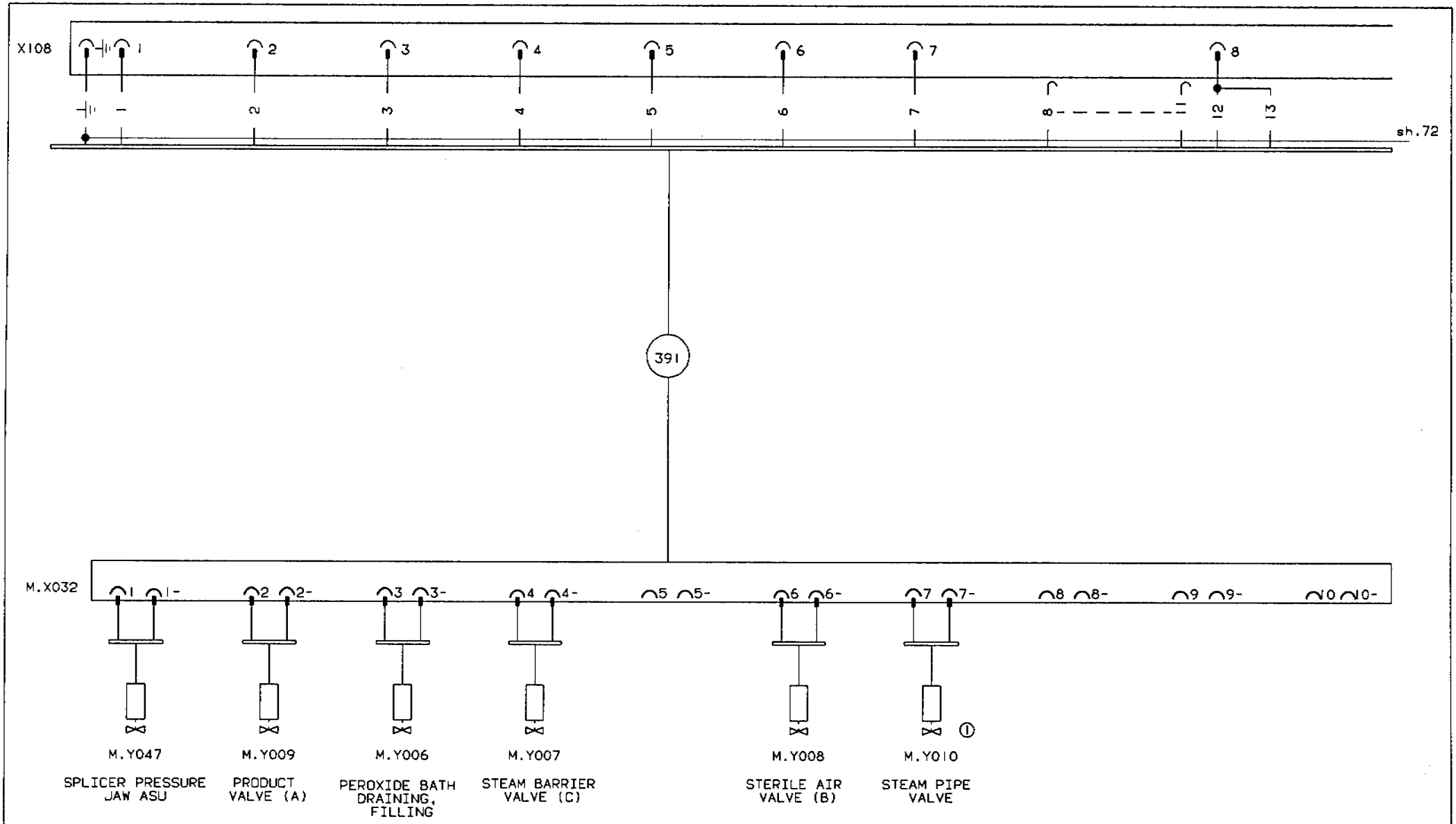

INTRODUCED WITH AM NO.	19666		DATE: 930630		SIGN. BWM/JÅB			1 EXTRA EQUIPMENT
ISSUE	A							
AM NO.	20127							
DATE	940220							
SIGN.	PSL/APO							DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: UPPER VALVE PANEL

MACHINE: TBA/8-100V

61334-71:01

Tetra Pak
LUND SWEDEN

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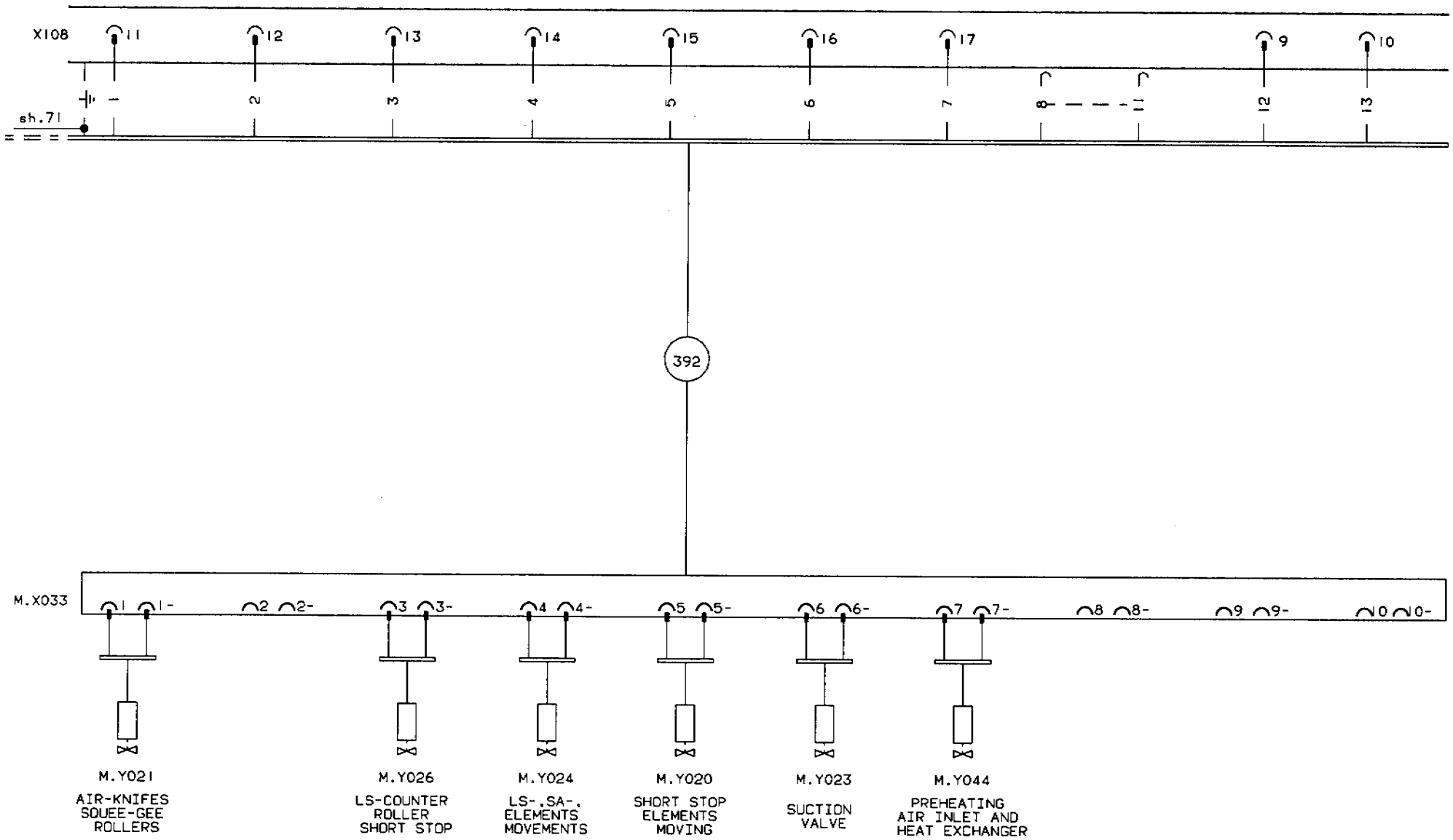

INTRODUCED WITH AM NO	19666	DATE: 930630	SIGN: BWM/JÅB
ISSUE	A		
AM NO.	20127		
DATE	940220		
SIGN.	PSL/APO		

DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: UPPER VALVE PANEL

MACHINE: TBA/8-100V

61334-72:01

Tetra Pak
LUND SWEDEN

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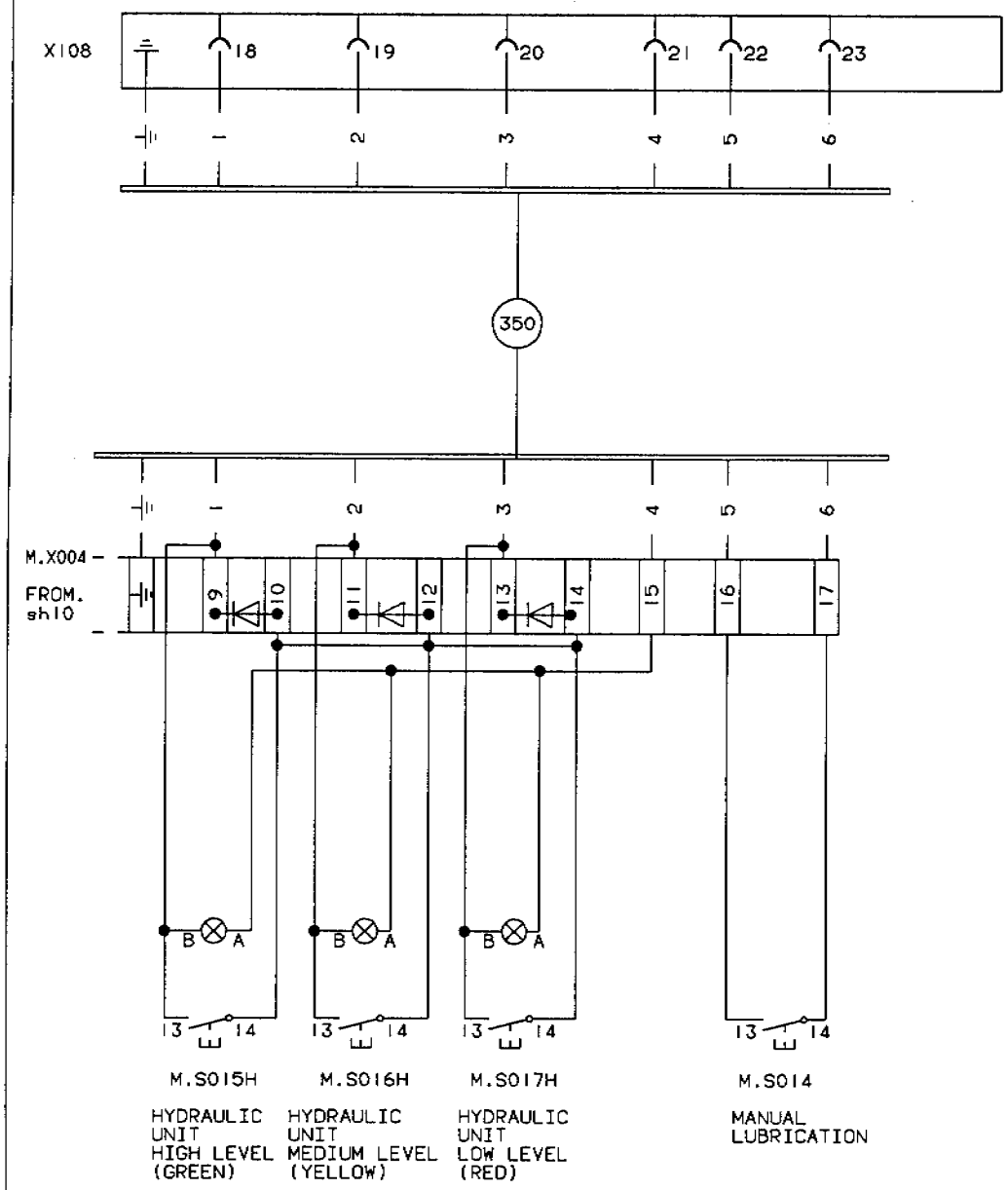

INTRODUCED WITH AM NO.	19666		DATE 930630		SIGN. BWM/JÅB			
ISSUE	A							
AM NO.	20127							
DATE	940303							
SIGN.	PSL/APO							

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: UPPER VALVE PANEL

MACHINE: TBA/8-100V

61334-73:01

Tetra Pak
LUND SWEDEN

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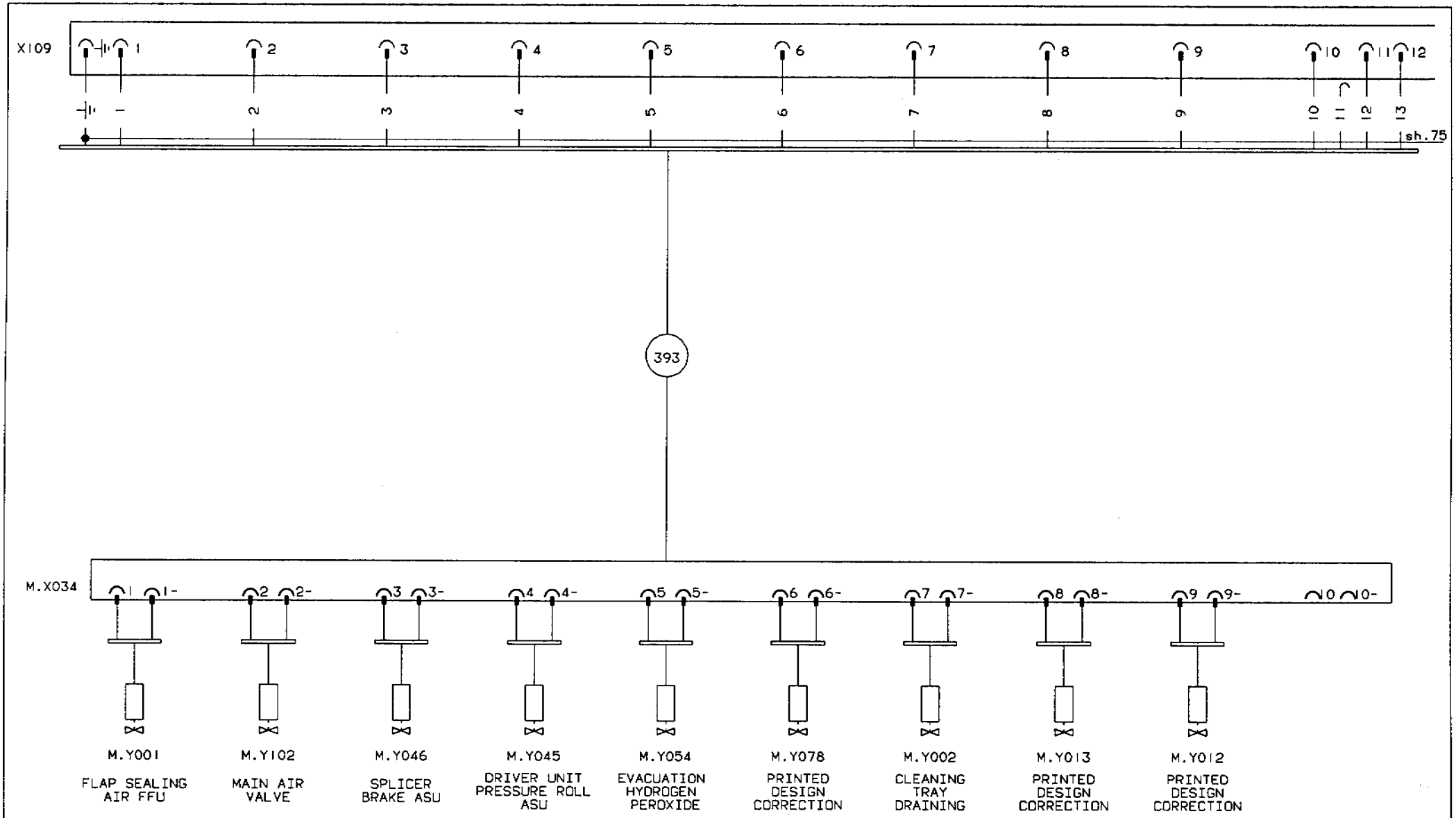

INTRODUCED WITH AM NO. 19666	DATE: 930630	SIGN. BWM/JÅB	
ISSUE A			DESCRIPTION: UPPER VALVE PANEL
AM NO. 20127			
DATE 940220			MACHINE: TBA/8-100V
SIGN. PSL/APO		DRAWING REMARKS	61334-74:01

ALTERATIONS ONLY IN CADAM

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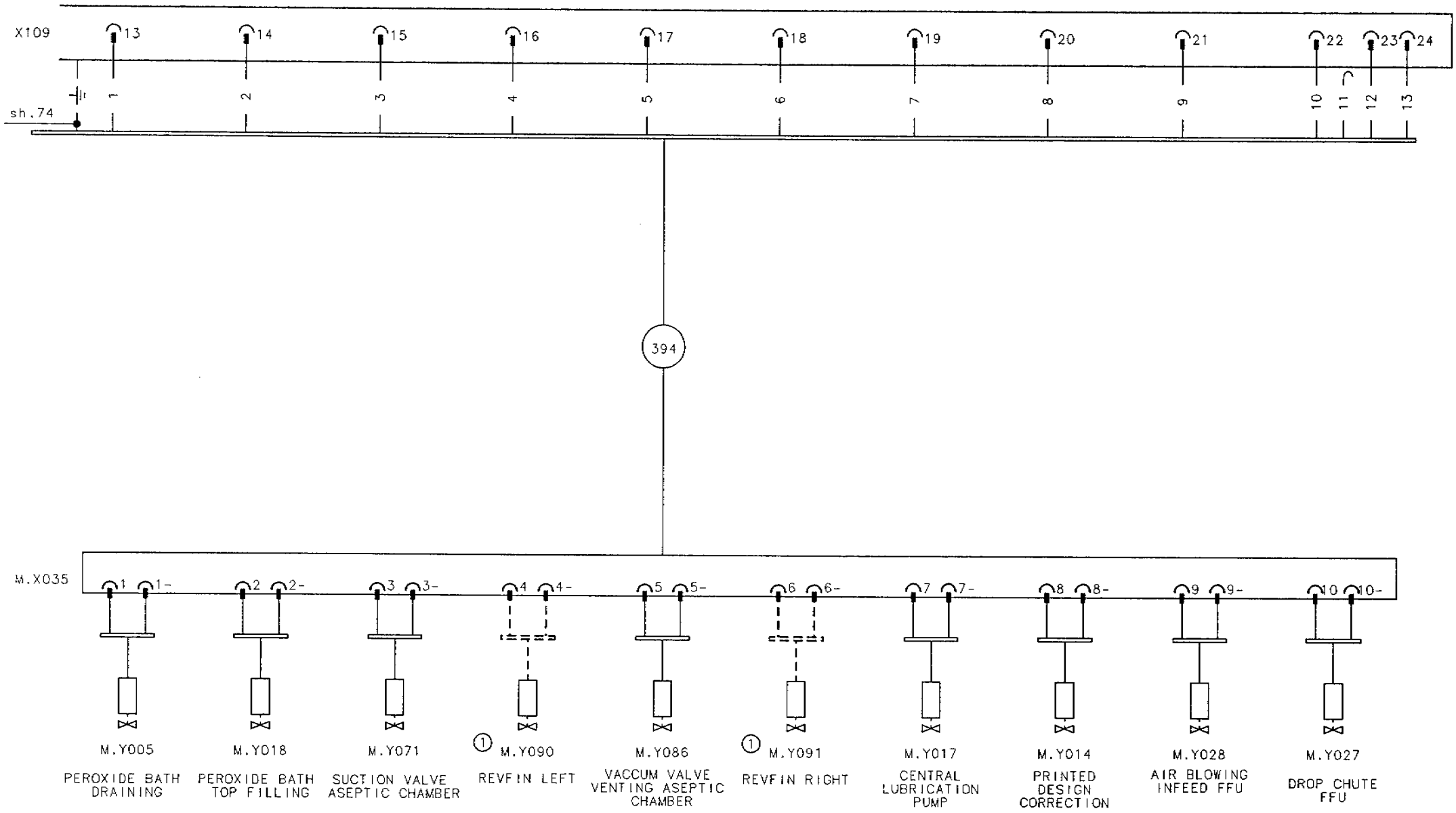

Note	A				1 EXTRA EQUIPMENT	Tetra Pak	Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
ECN No.	71023						Machine TBA/8-1000	Denomination UPPER VALVE PANEL			
Sign./Date	DBI/970901										
Appr./Date	DBI/970901				Drawing remarks	Company Tetra Brik R.& D. S.p.A.		Drawing No 61334-75:36			Page –

Tetra Pak
LUND SWEDEN

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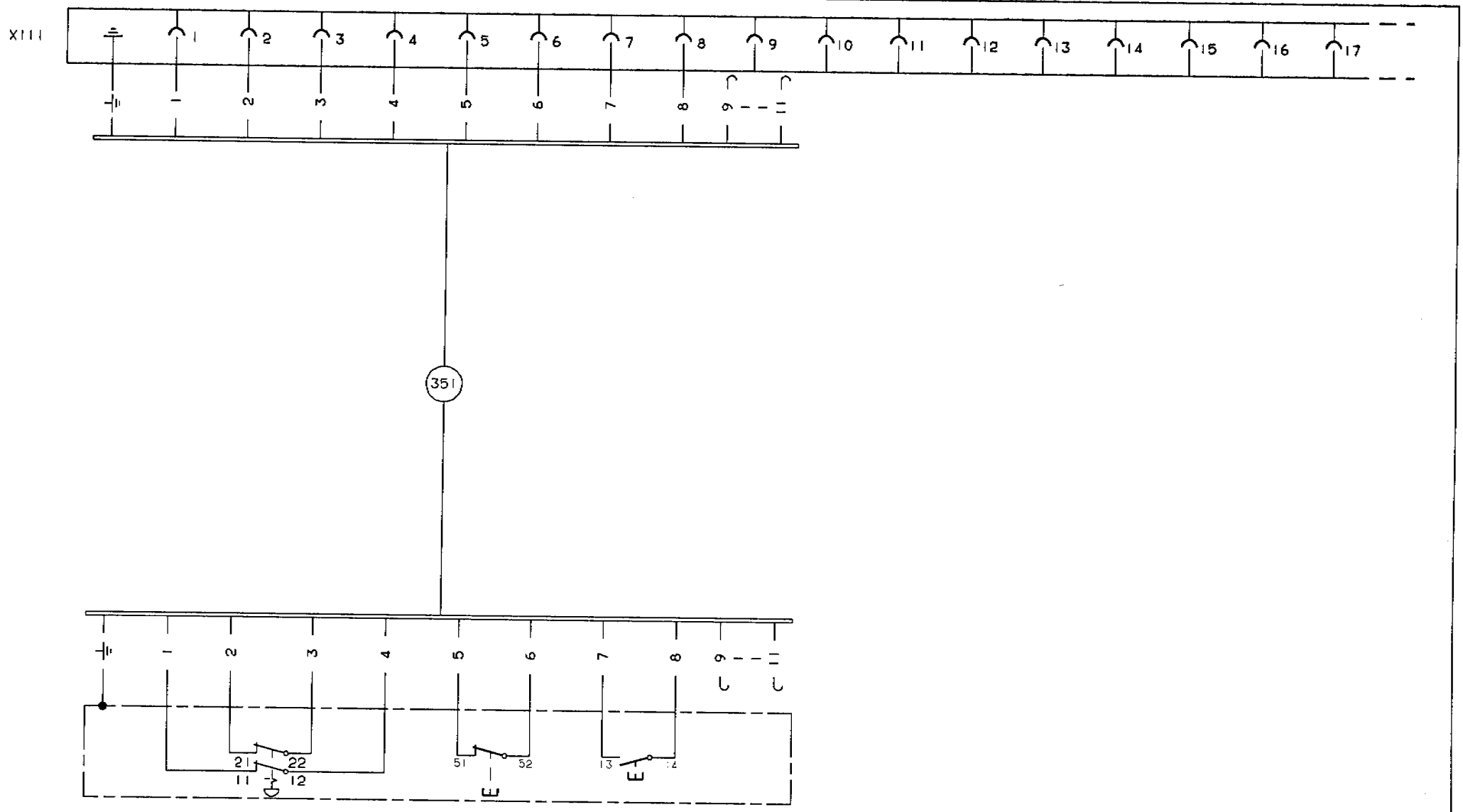

INTRODUCED WITH AM NO.	20667	DATE: 950317	SIGN. PSL/PGI		
ISSUE					
AM NO.					
DATE					
SIGN.					

DRAWING REMARKS

DESCRIPTION: SIDE PROTECTION

MACHINE: TBA/8-100V

61334-80:02

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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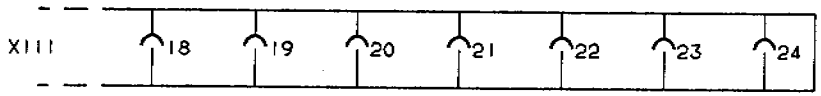

INTRODUCED WITH AM NO.	19666			DATE: 930630		SIGN. BWM/JÅB			
ISSUE									
AM NO									
DATE									
SIGN									

DRAWING REMARKS

ALTERATIONS ONLY IN CADAM

DESCRIPTION: SIDE PROTECTION

MACHINE: TBA/8-100V

61334-81:01

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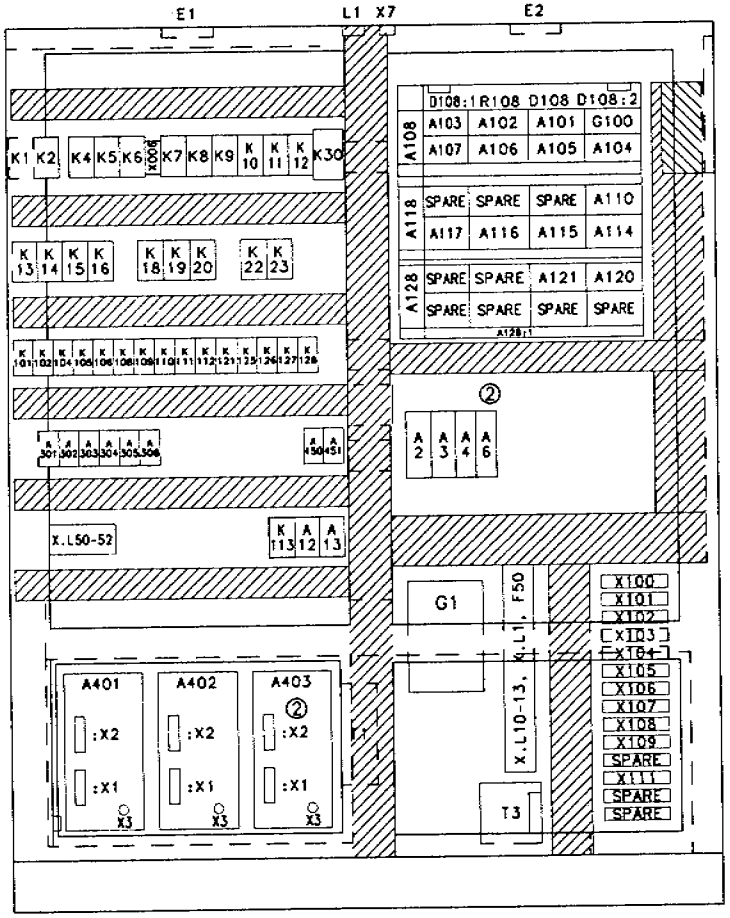
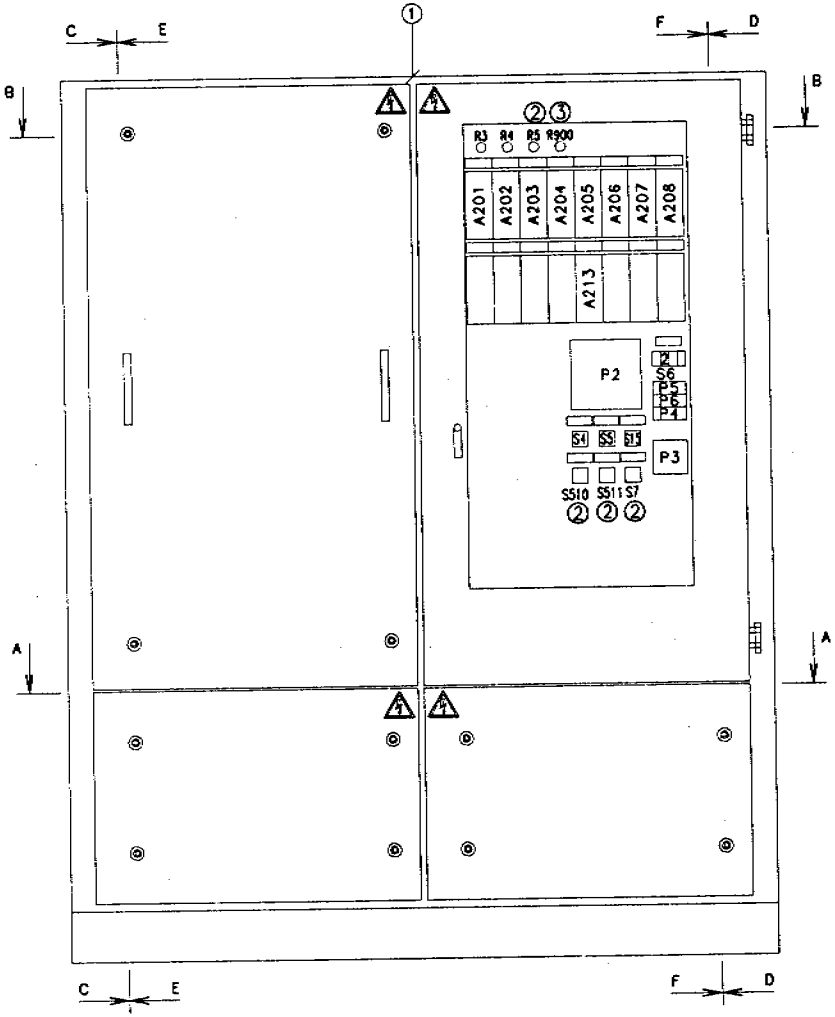


FRONT VIEW



Note	A				① 400MM AWM CABLES, OUTSIDE CONTROL	Tetra Pak	Designer DBI	Date 970901	Approved DBI Date 970901	Doc. class –
ECN No.	71023				CABINET, TO CONNECTION BOX M.X012		Machine TBA/8-1000	Denomination CONTROL CABINET		
Sign./Date	DBI/970901				② EXTRA EQUIPMENT. ③ SPARE.		Company Tetra Brik R.& D. S.p.A.	Drawing No 52534-05:36		Page –
Appr./Date	DBI/970901				Drawing remarks					

Tetra Pak
LUND SWEDEN

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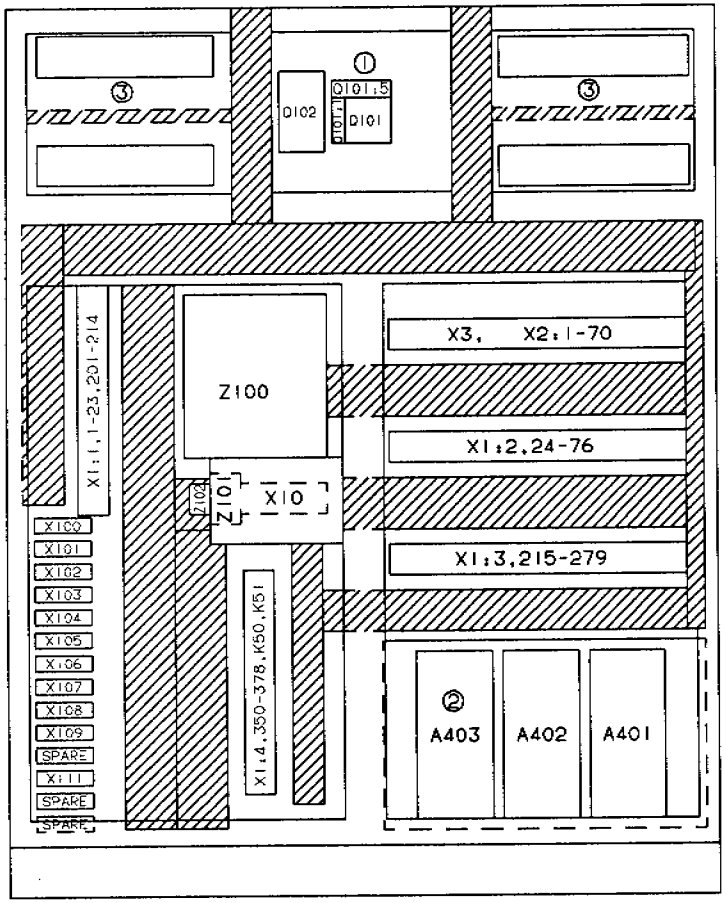

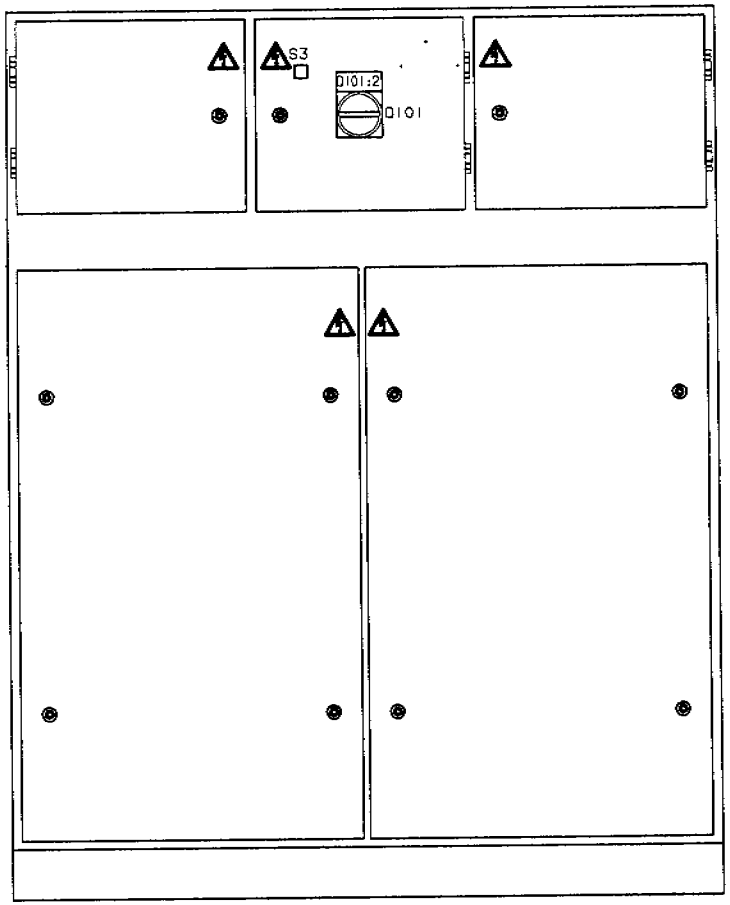

REAR SIDE

INTRODUCED WITH AM NO.	20127	DATE: 940222	SIGN. PSL/APO	① Q101:5 TO BE MOUNTED ON THE TOUCH COVER ② EXTRA EQUIPMENT ③ FOR INFORMATION ABOUT FUSES AND OVERLOAD PROTECTIONS SEE FUSE PANEL LABEL 573375-1 AND 573375-2. DRAWING REMARKS	DESCRIPTION: CONTROL CABINET
ISSUE					MACHINE: TBA/8-100V
AM NO.					52534-07:01
DATE					
SIGN					

ALTERATIONS ONLY IN CADAM

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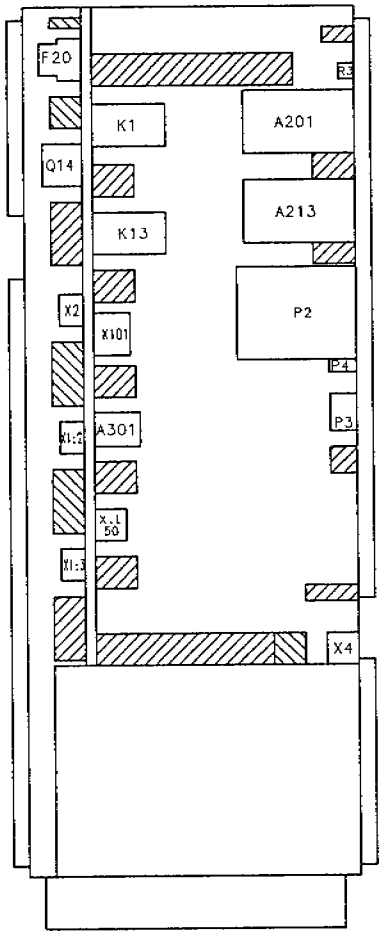
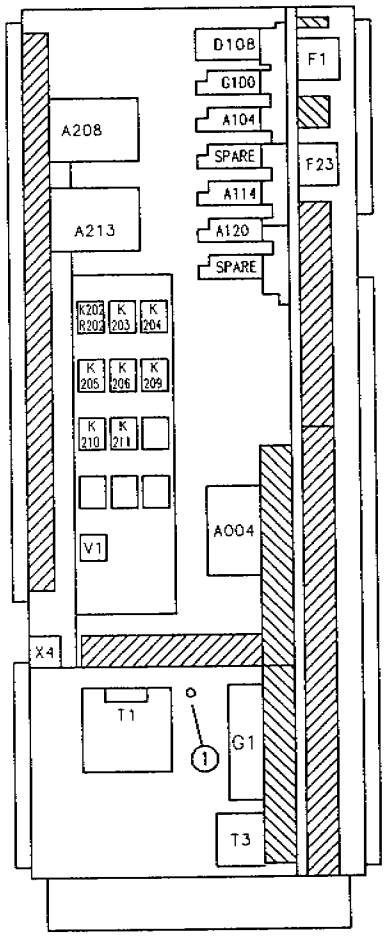


VIEW C - C



VIEW D - D

Note	A				1 SHIELD CONNECTION EARTH WIRE TO TRANSFORMER T001.
ECN No.	71023				NOTE: THE EARTH WIRE MUST NOT BE SPLICED
Sign./Date	DBI/970901				
Appr./Date	DBI/970901				Drawing remarks

Tetra Pak

Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
Machine TBA/8-1000	Denomination CONTROL CABINET		
Company Tetra Brik R.& D. S.p.A.	Drawing No 52534-09:36	Page –	

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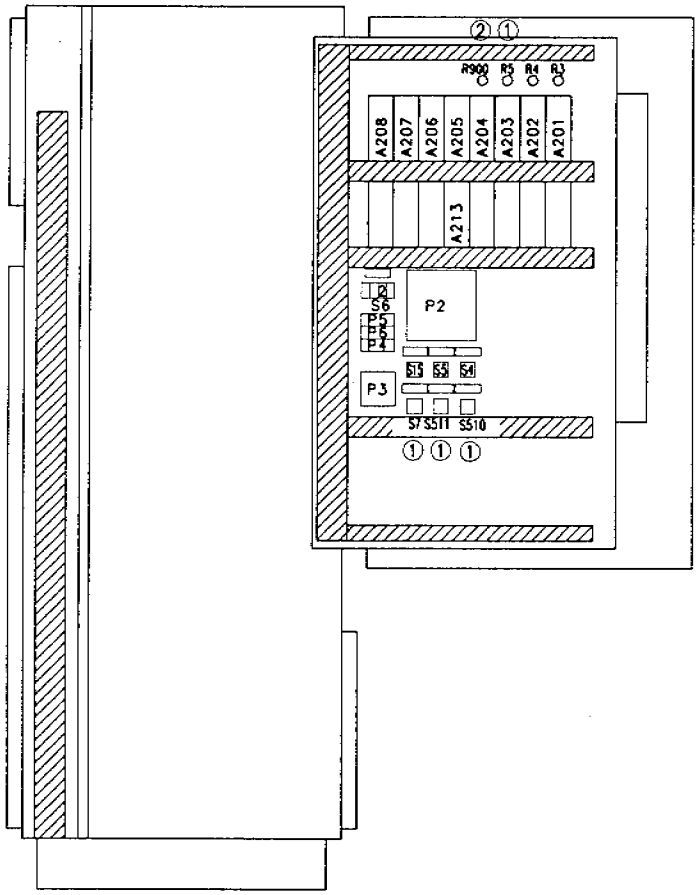
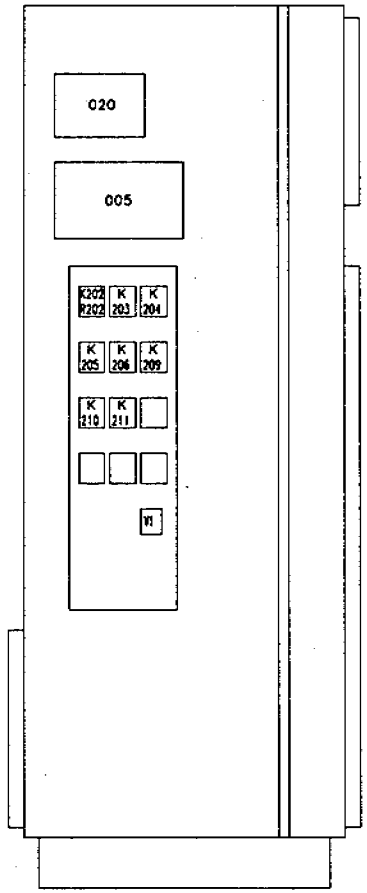


VIEW F - F



VIEW E - E

Note	A				1 EXTRA EQUIPMENTS	Tetra Pak	Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
ECN No.	71023				2 SPARE		Machine TBA/8-1000	Denomination CONTROL CABINET			
Sign./Date	DBI/970901					Company Tetra Brik R.& D. S.p.A.	Drawing No 52534-11:36				Page –
Appr./Date	DBI/970901				Drawing remarks						

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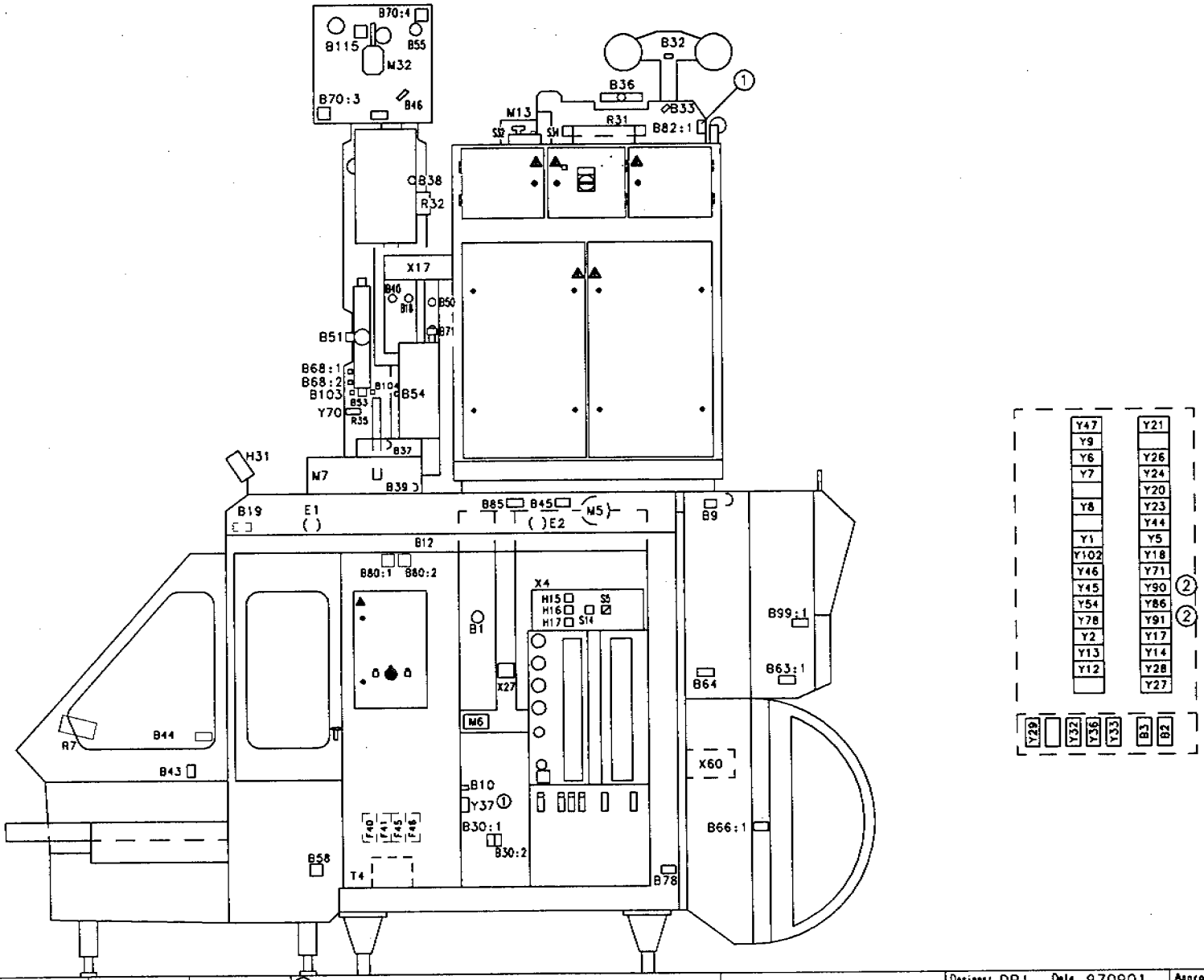

Note	A				① EXTRA EQUIPMENT	Tetra Pak	Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
ECN No.	71023				② EXTRA EQUIPMENT		Machine TBA/8-1000	Denomination MACHINE, RIGHT VIEW			
Sign./Date	DBI/970901					Company Tetra Brik R.& D. S.p.A.	Drawing No 52534-16:36			Page –	
Appr./Date	DBI/970901				Drawing remarks						

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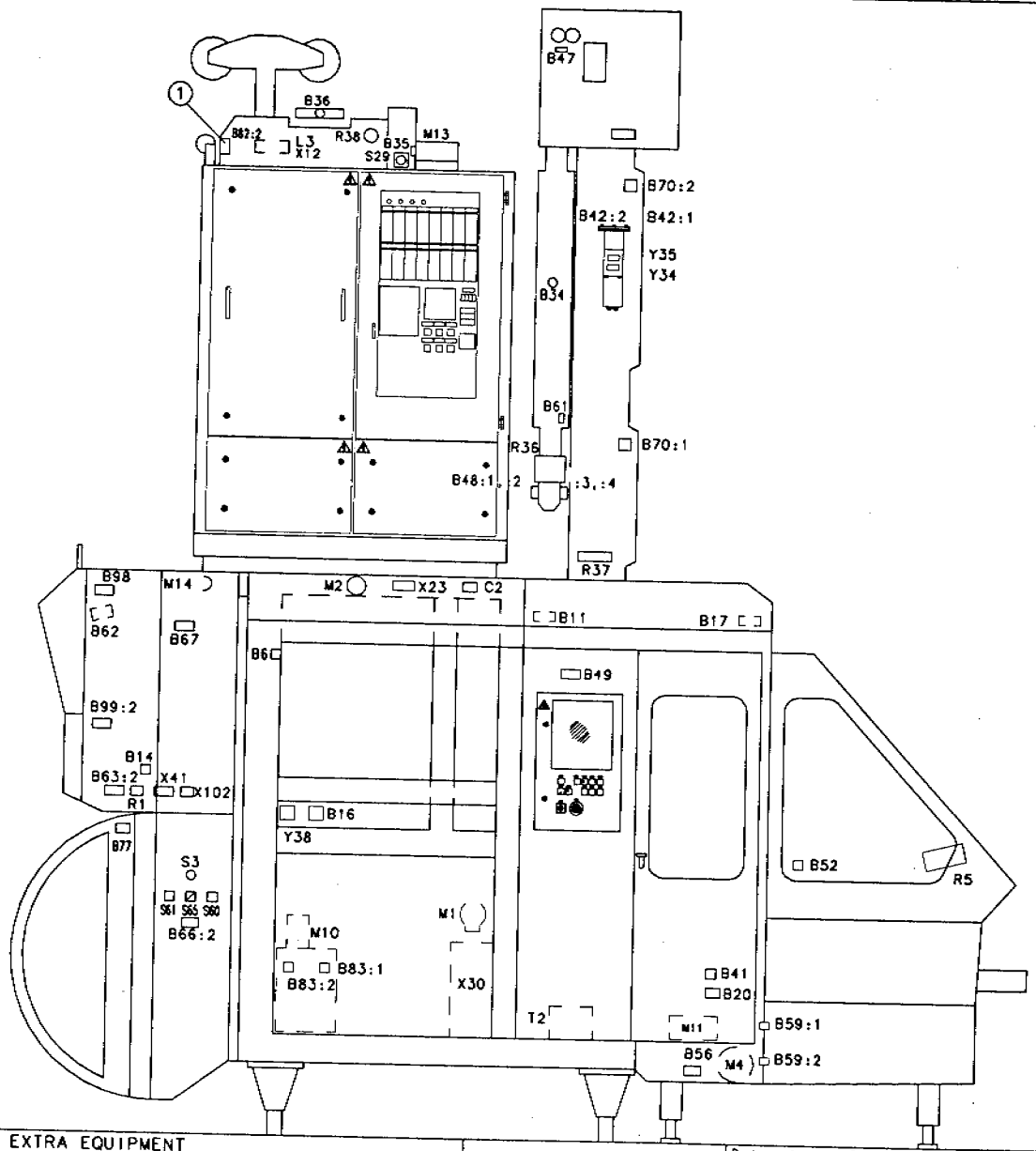

Note	A				1 EXTRA EQUIPMENT
ECN No.	71023				
Sign./Date	DBI/970901				
Appr./Date	DBI/970901				Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer DBI	Date 970901	Approved DBI	Date 970901	Doc. class –
Machine TBA/8-1000	Denomination MACHNE, LEFT VIEW			
Drawing No 52534-17:36				Page –

Tetra Pak
LUND SWEDEN

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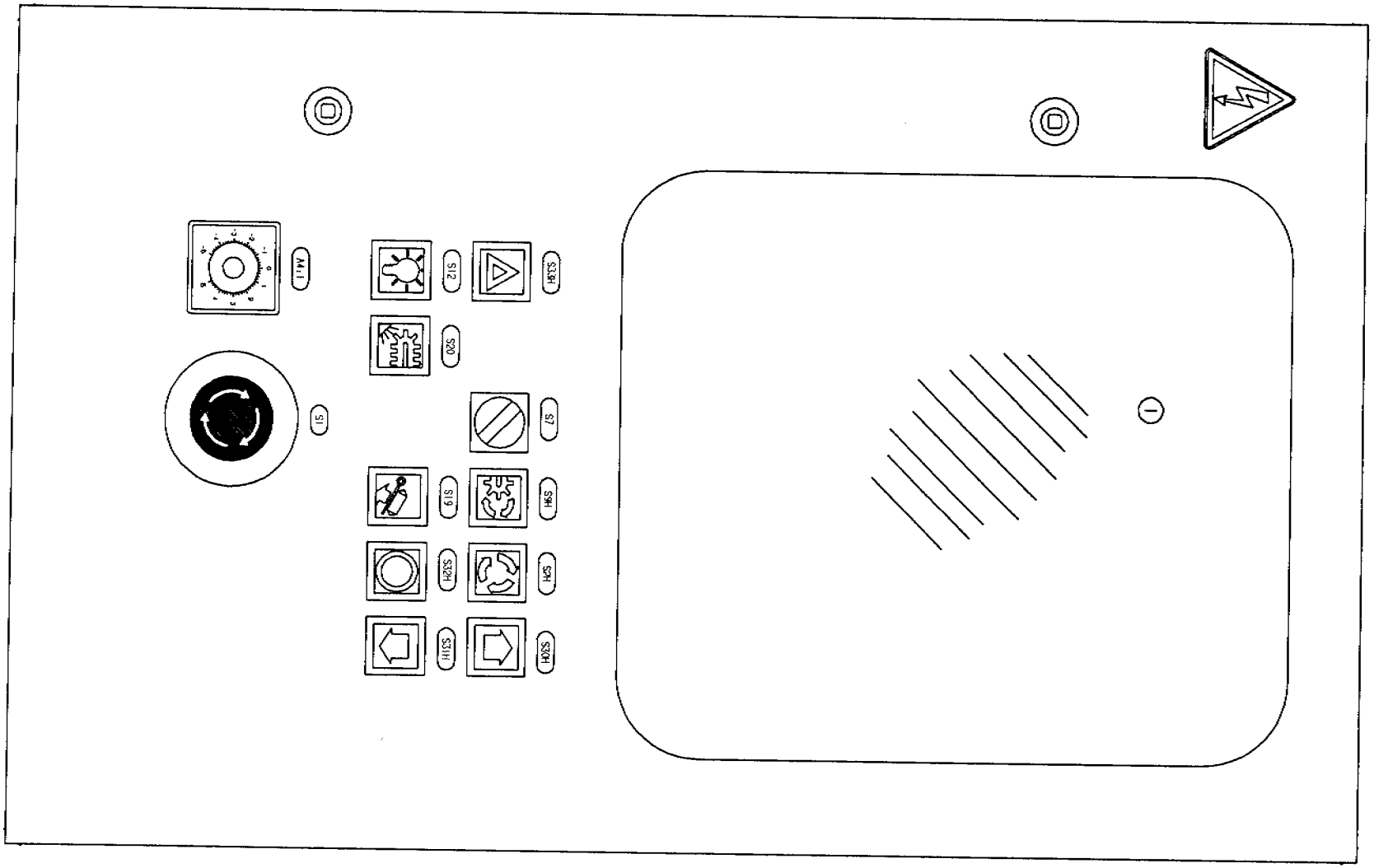

INTRODUCED WITH AM NO.	20127	DATE: 940222	SIGN. PSL	① MACHINE DISPLAY ACCORDING TO DRAWING 4-577430	DESCRIPTION: CONTROL PANEL		
ISSUE							
AM NO.							
DATE							
SIGN.				CRAWING REMARKS	MACHINE: TBA/8-100V	52534-20:01	

ALTERATIONS ONLY IN CADAM

Tetra Pak
LUND SWEDEN

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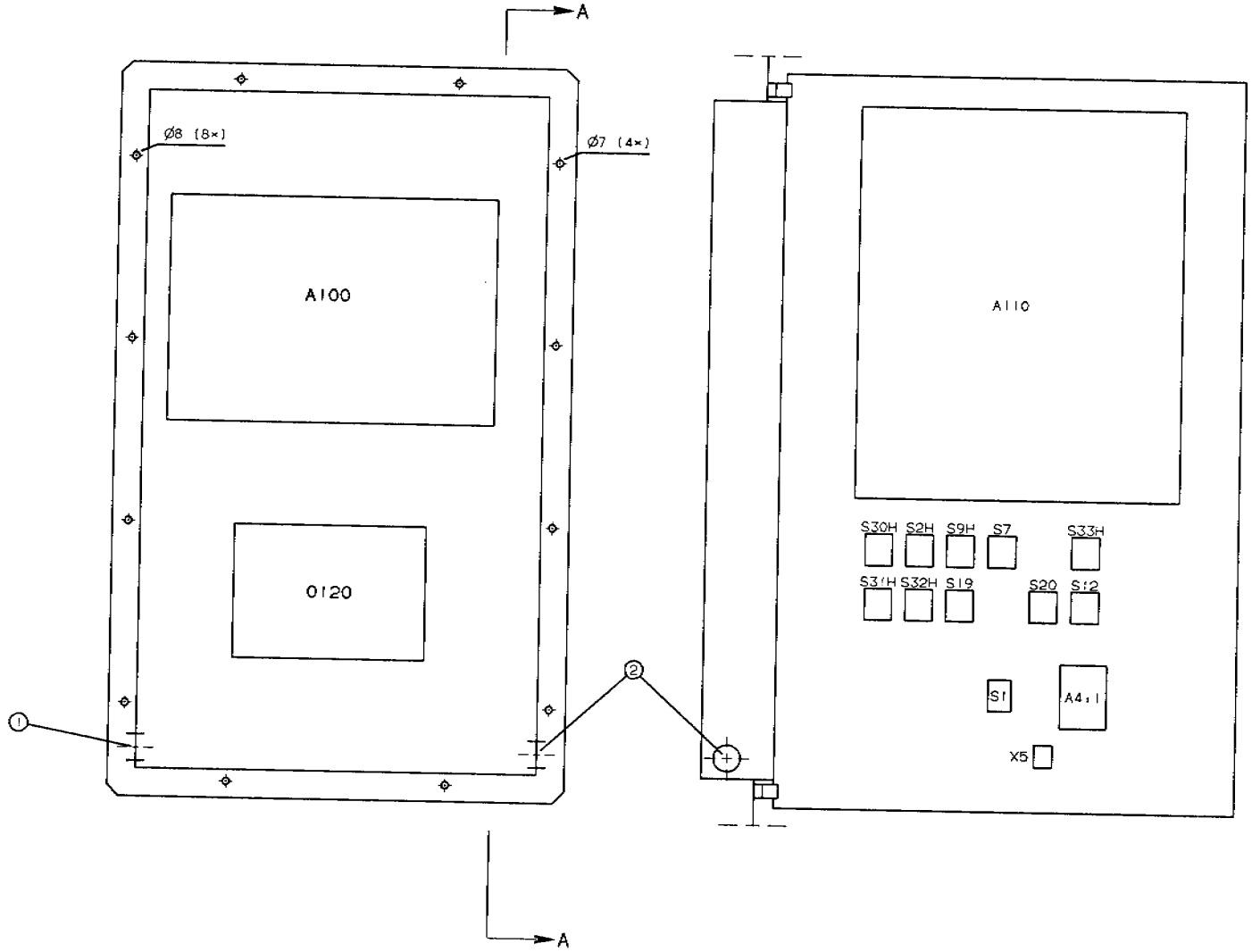


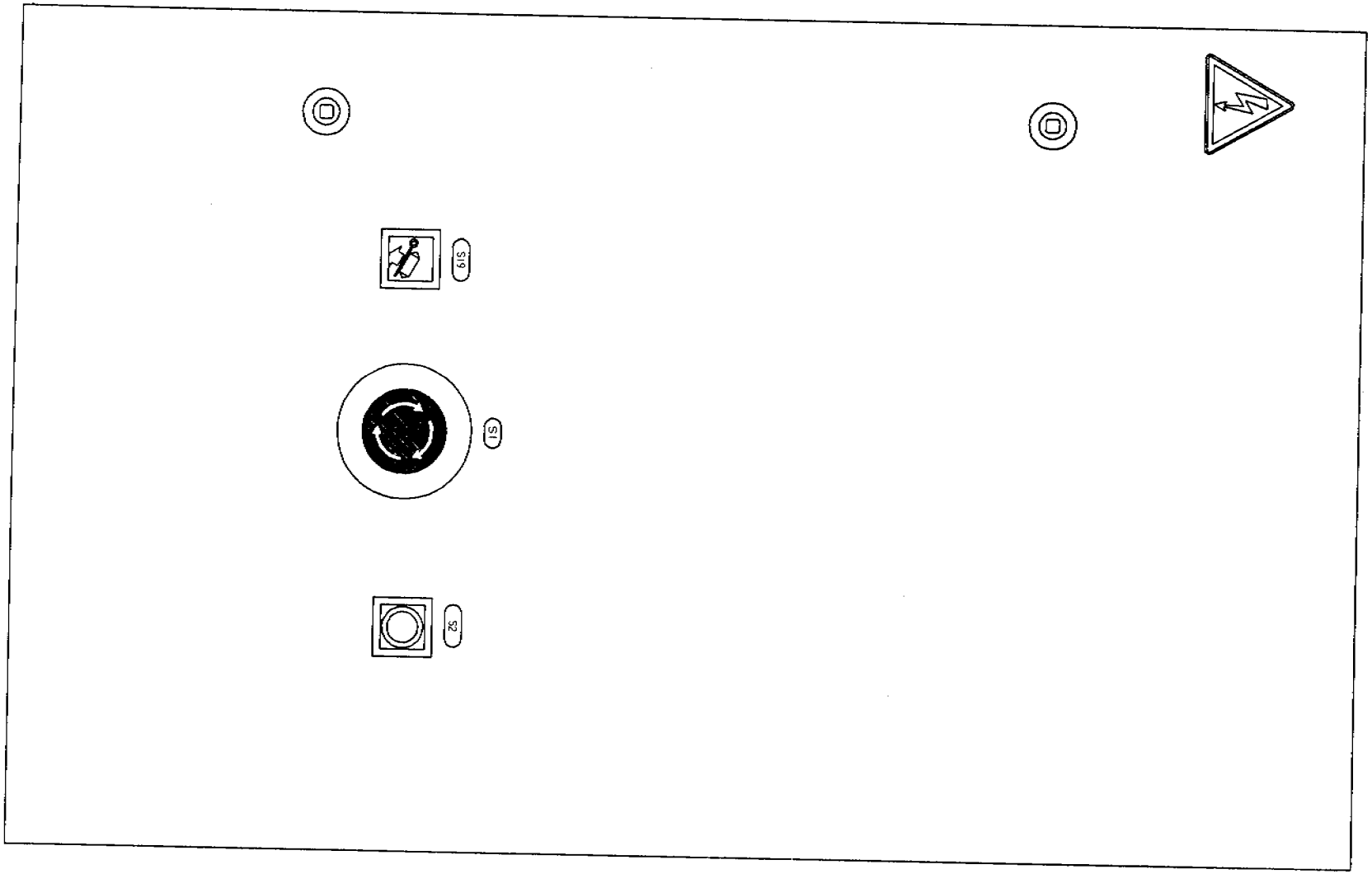
OPEN VIEW

A - A
SECTION VIEW

INTRODUCED WITH AM NO	20127	DATE: 940222	SIGN PSL	① CABLE INLET Ø 30 mm ② SPARE CABLE INLET Ø 30 mm	DESCRIPTION: CONTROL PANEL, OPEN AND SECTION VIEW
ISSUE					
AM NO					
DATE					MACHINE: TBA/8-100V
SIGN					52534-22:01
ALTERATIONS ONLY IN CADAM				DRAWING REMARKS	

Tetra Pak
LUND SWEDEN

This drawing must not without the consent of Tetra Pak be copied, transmitted or disclosed to any third party.



INTRODUCED WITH AM NO.	20127			DATE: 940222		SIGN. PSL			
ISSUE									
AM NO.									
DATE									
SIGN									

ALTERATIONS ONLY IN CADAM

DRAWING REMARKS

DESCRIPTION: MOUNTING DRAWING, SIDE PROTECTION

MACHINE: TBA/8-100V

52534-24:01

Tetra Pak
LUND SWEDEN

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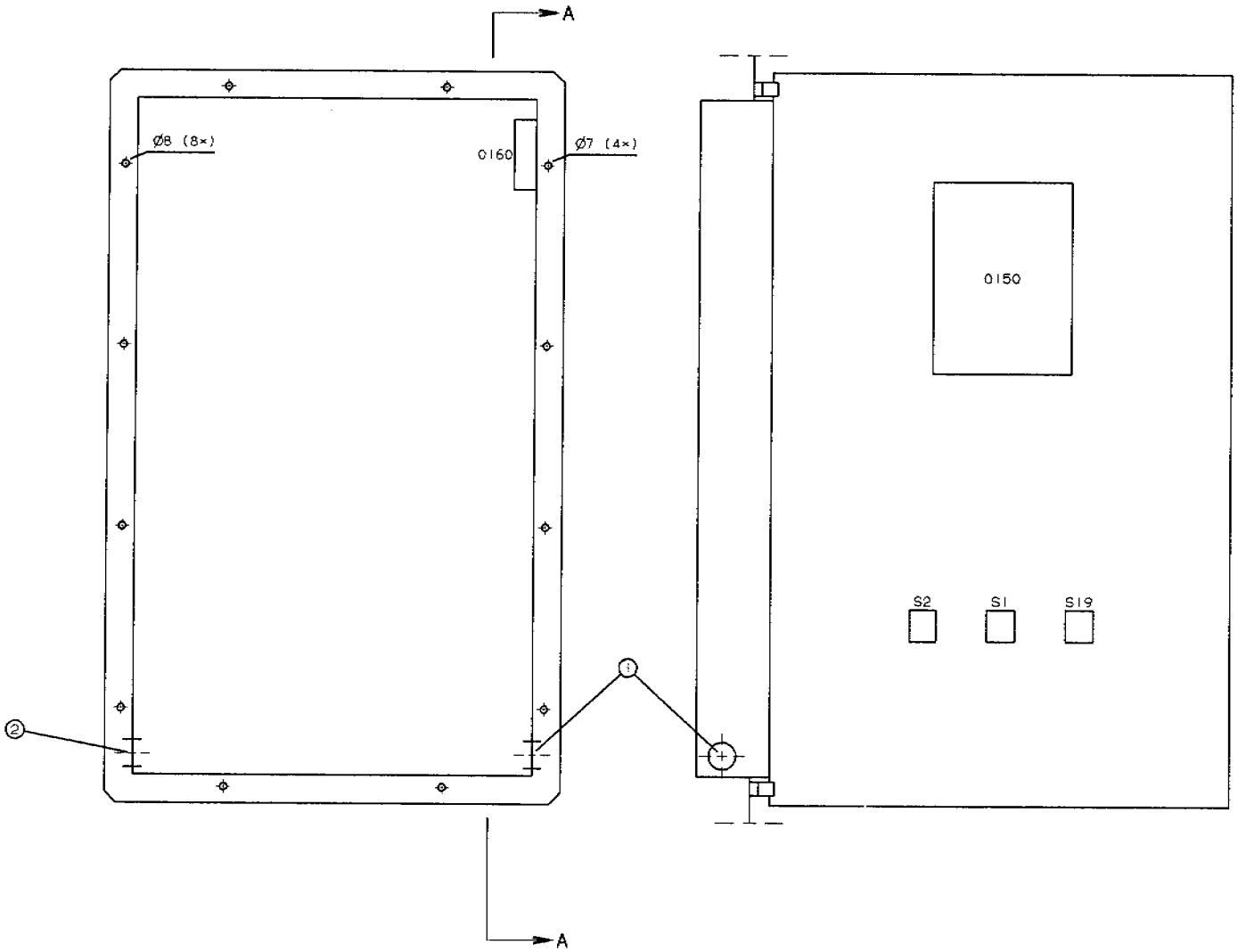

OPEN VIEW

A - A
SECTION VIEW

INTRODUCED WITH AM NO.	20127	DATE: 940222	SIGN. PSL	① CABLE INLET Ø 30 mm	DESCRIPTION: SIDE PROTECTION PANEL, OPEN AND SECTION VIEW
ISSUE				② SPARE CABLE INLET Ø 30 mm	
AM NO					MACHINE: TBA/8-100V
DATE					52534-26:01
SIGN.				DRAWING REMARKS	

ALTERATIONS ONLY IN CADAM

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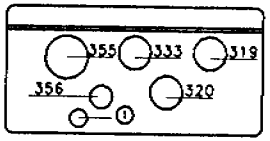
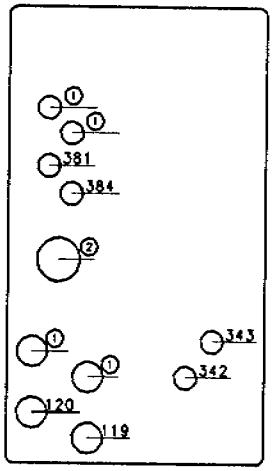
CABLE INLETS

CONNECTION BOX M.X30
FINAL FOLDER UNIT
(1/2 SIZE)

UPPER SIDE(TOP VIEW)

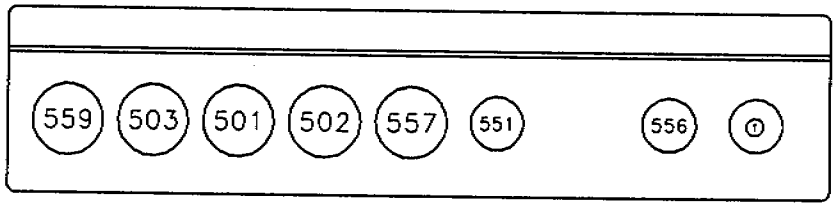


RIGHT SIDE(BOTTOM VIEW)

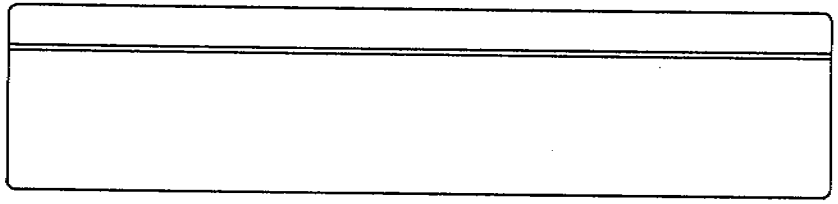


CONNECTION BOX M.X12
SUPER STRUCTURE EL-CABINET

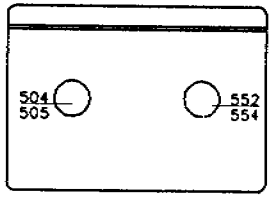
RIGHT SIDE(TOP VIEW)



LEFT SIDE(FRONT VIEW)

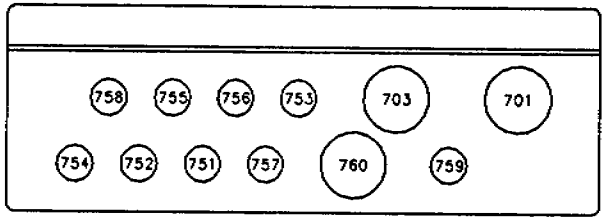


GABLE SIDE(FRONT VIEW)

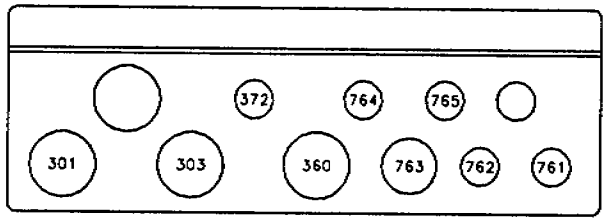


CONNECTION BOX M.X60
AUTOMATIC SPLICING UNIT

UPPER SIDE(TOP VIEW)



LOWER SIDE(BOTTOM VIEW)



Note	A			
ECN No.	70684			
Sign./Date	FRM/970314			
Appr./Date	FRM/970314			

1. FOR EXTRA EQUIPMENT
2. CABLE INCLUDED: 150,151,152,153,155, 156,158,159

Drawing remarks

Tetra Pak

Company: Tetra Brik R.& D. S.p.A.

Designer FRM Date 970314 | Approved FRM Date 970314 | Doc. class –

Machine: TBA/8-1000

Denomination: CONNECTION DIRECTION

Drawing No: 52534-28:30

Page –