



ETOR - Esquemas Electricos en CAD

Apdo. 143 - 20600 Eibar - Guipúzcoa

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web: www.etor.es

CLIENTE	:	CLIENTE
MODELO	:	MODELO DE MAQUINA
CONTROL NUMERICO	:	CONTROL NUMERICO
AUTOMATA PLC	:	AUTOMATA
SISTEMA DE REGULACION	:	REGULADORES
TENSION DE ALIMENTACION	:	380VAC / 50HZ
TENSION DE MANIOBRA	:	24VDC
POTENCIA MAQUINA	:	80 KW
INTENSIDAD MAQUINA	:	125 A
Sistema CAE	:	SEE ELECTRICAL EXPERT



DIBUJADO OSCAR
FECHA 01-10-2007

VERIFICADO OSCAR
FECHA 02/11/2009

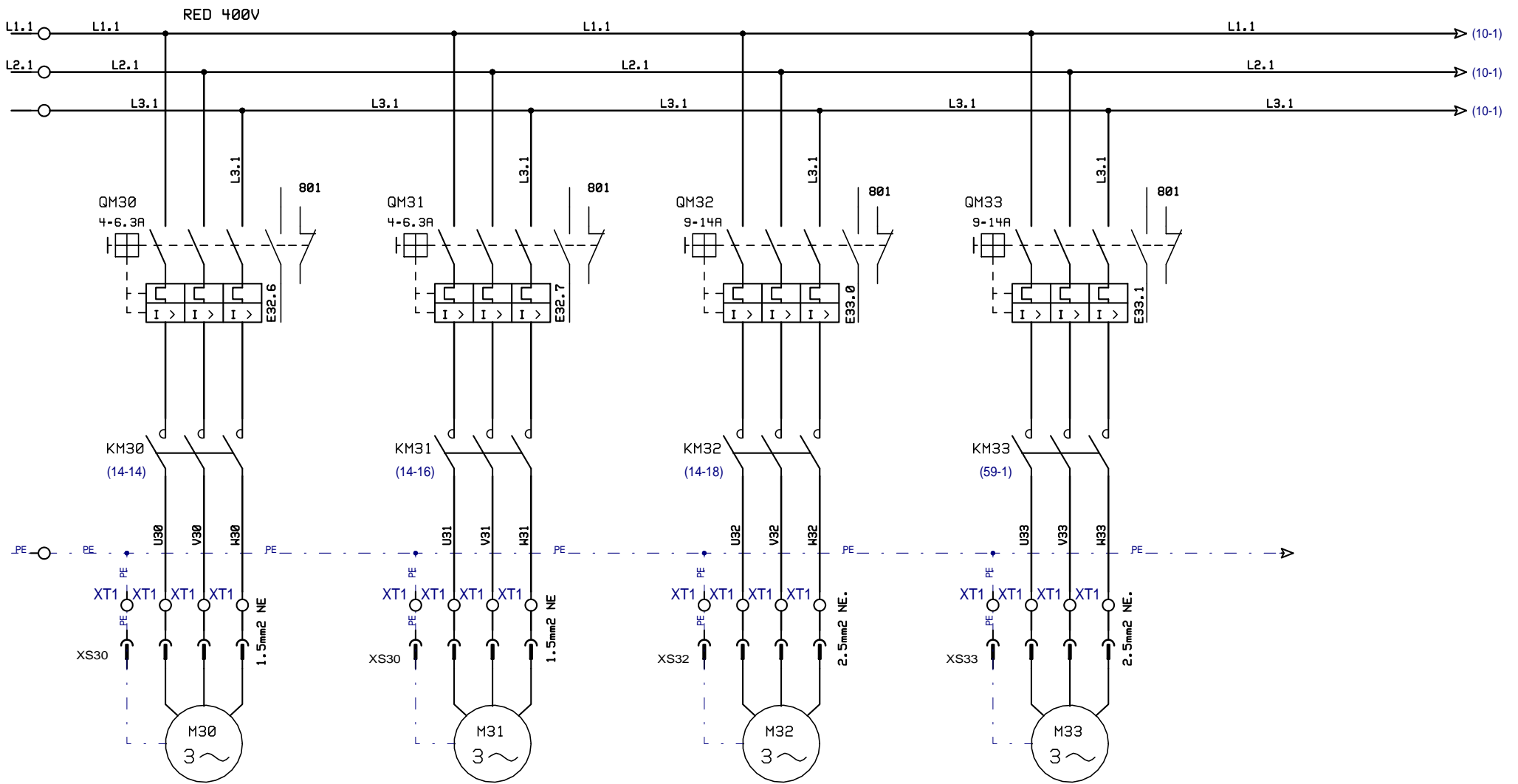
MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

PORTADA

GRUPO / FOLIO / TOTAL
H / 01 / 29

◀ 01 02 ▶
Programa SEE Electrical Expert v. 3.60



REFRIGERACION
EXTERIOR 1

2.2KW-1500RPM
5.3A-380V

REFRIGERACION
EXTERIOR 2

2.2KW-1500RPM
5.3A-380V

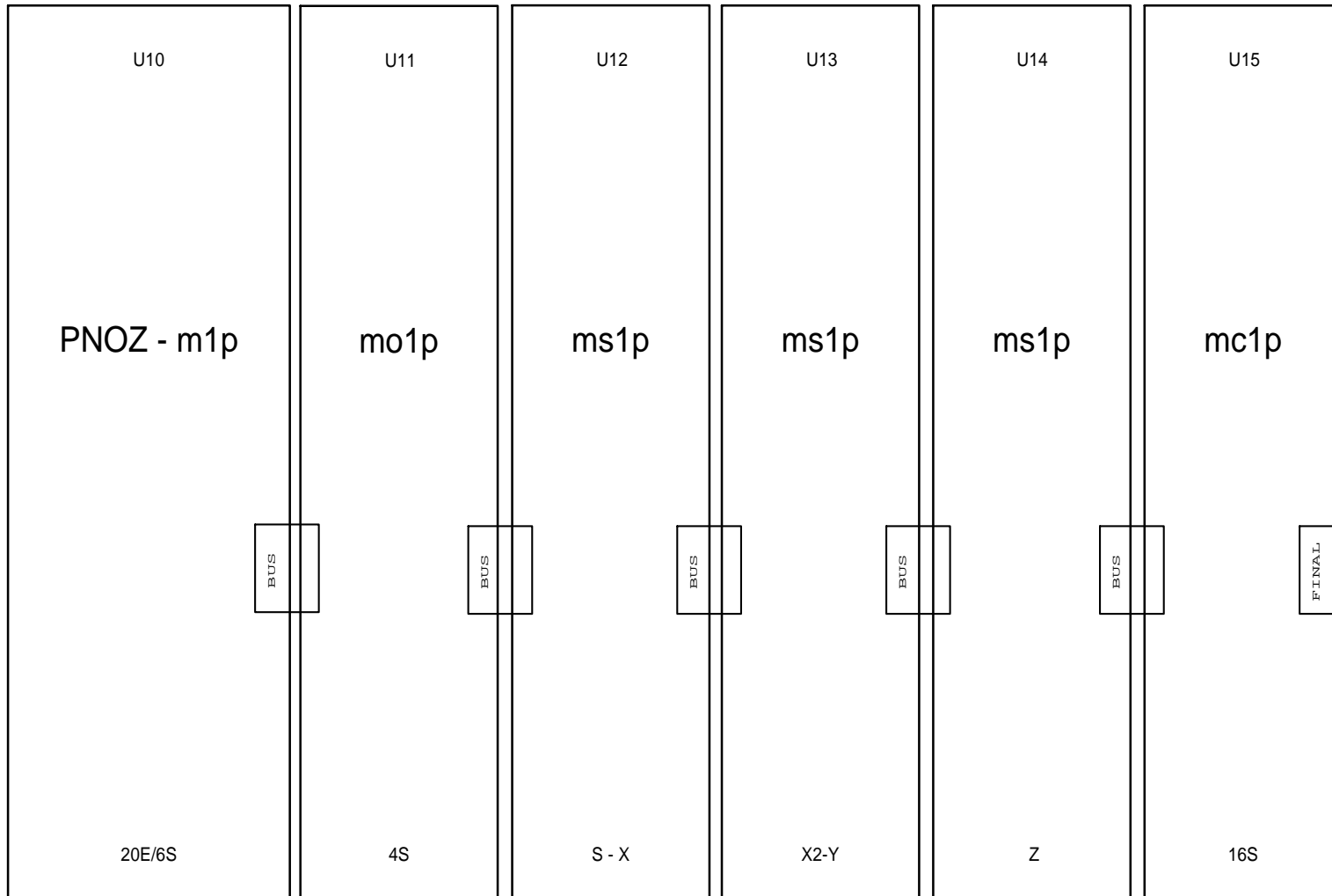
REFRIGERACION
INTERNA 1

4.6KW-1500RPM
10.05A-380V

REFRIGERACION
INTERNA 2

4.6KW-1500RPM
10.05A-380V

COMPOSICION EMERGENCIA PILZ



DIBUJADO OSCAR
FECHA 01-10-2007

VERIFICADO OSCAR
FECHA 02/11/2009

MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

**EMERGENCIA
COMPOSICION**

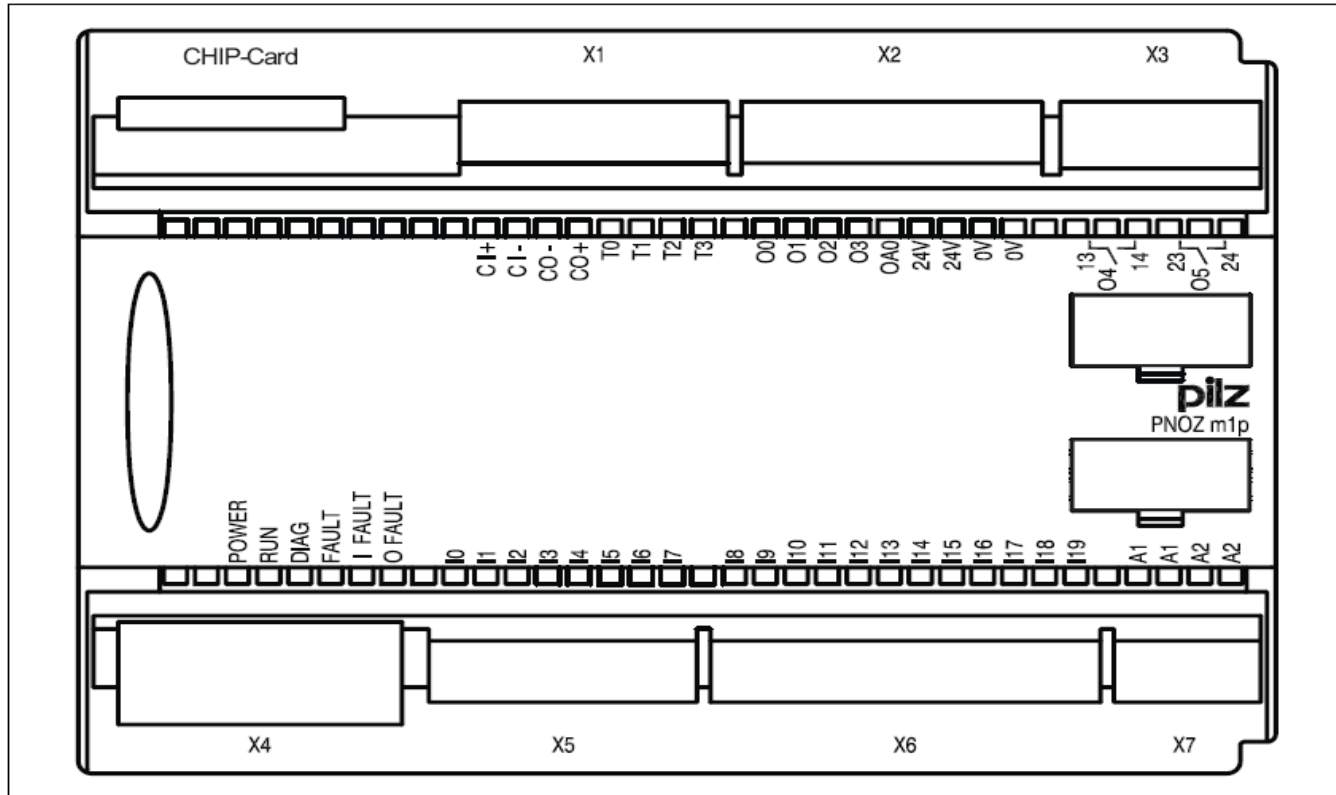
GRUPO / FOLIO / TOTAL
H / 04 / 29

◀ 03 05 ▶

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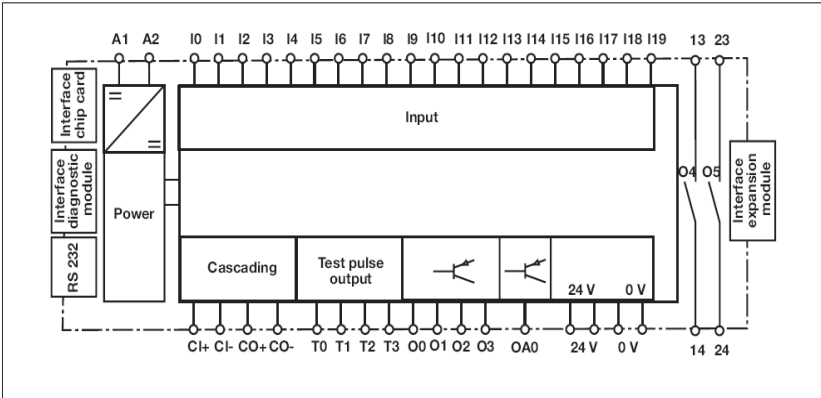


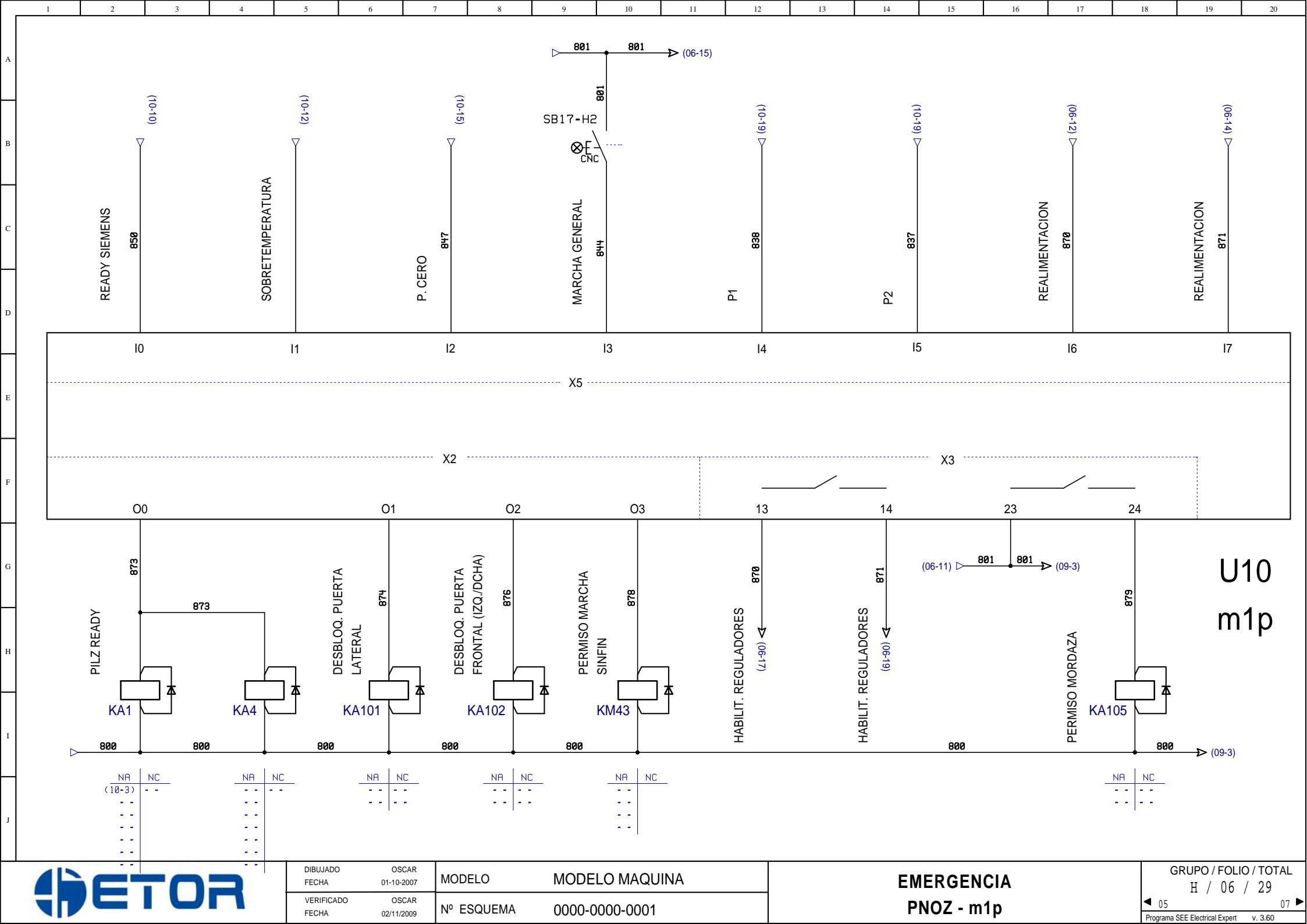
Terminal configuration



Base units PNOZ m1p

Block diagram





DIBUJADO OSCAR
FECHA 01-10-2007

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FECHA 02/11/2009

MODELO MODELO MAQUINA

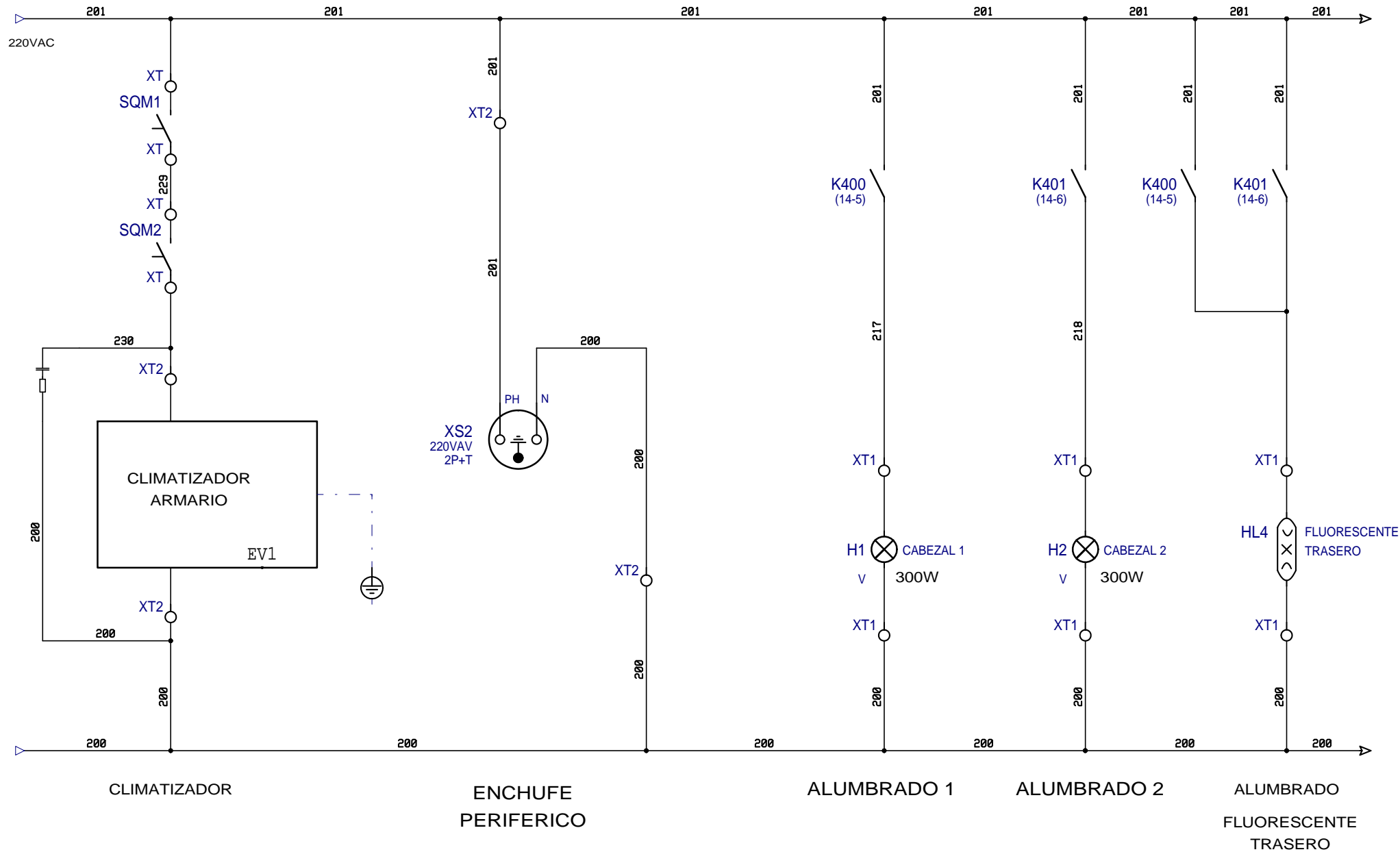
Nº ESQUEMA 0000-0000-0001

EMERGENCIA
PNOZ - m1p

GRUPO / FOLIO / TOTAL
H / 06 / 29

◀ 05 07 ▶

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CLIMATIZADOR

ENCHUFE
PERIFERICO

ALUMBRADO 1

ALUMBRADO 2

ALUMBRADO
FLUORESCENTE
TRASERO



DIBUJADO OSCAR
FECHA 01-10-2007

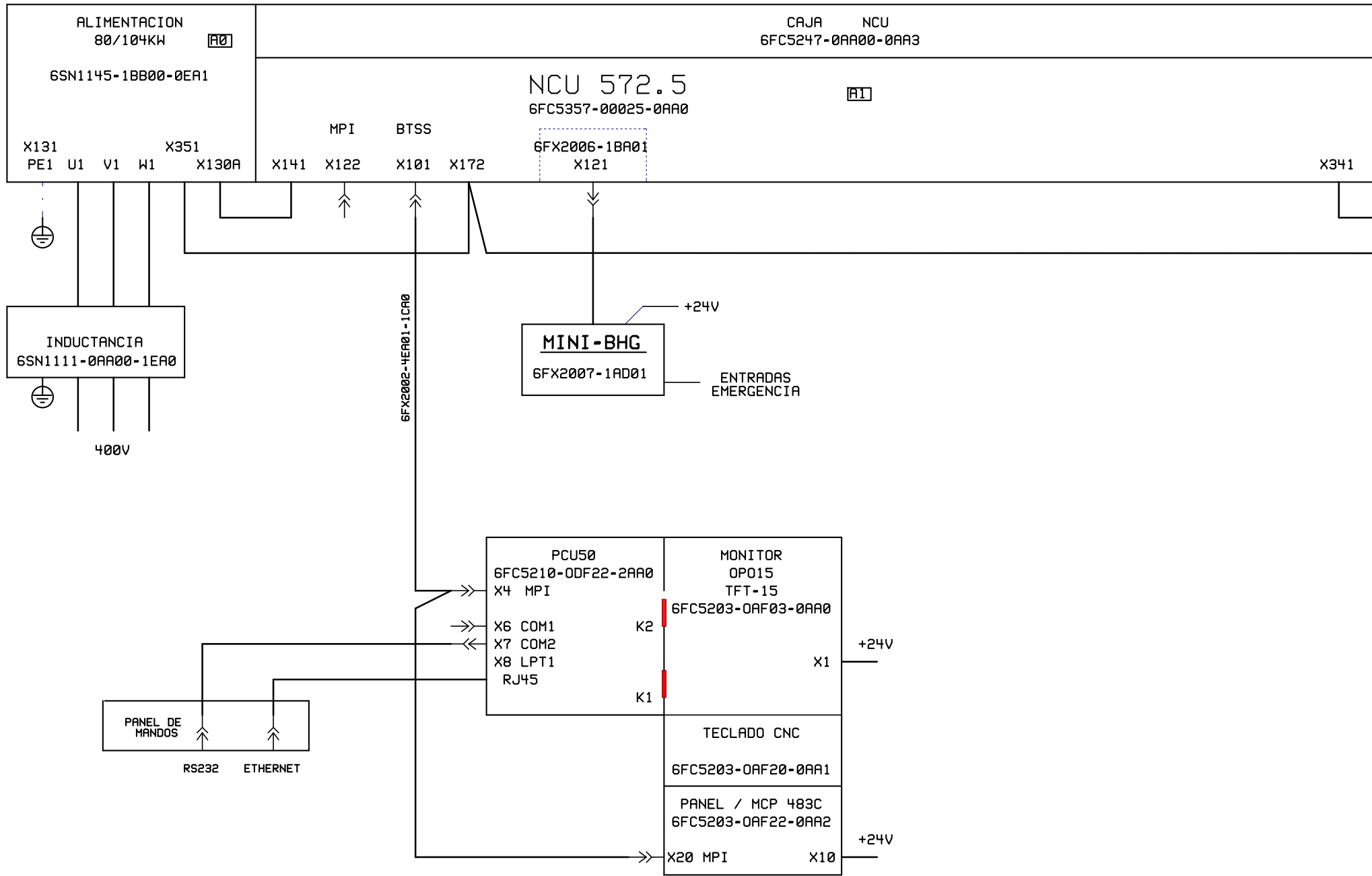
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FECHA 02/11/2009

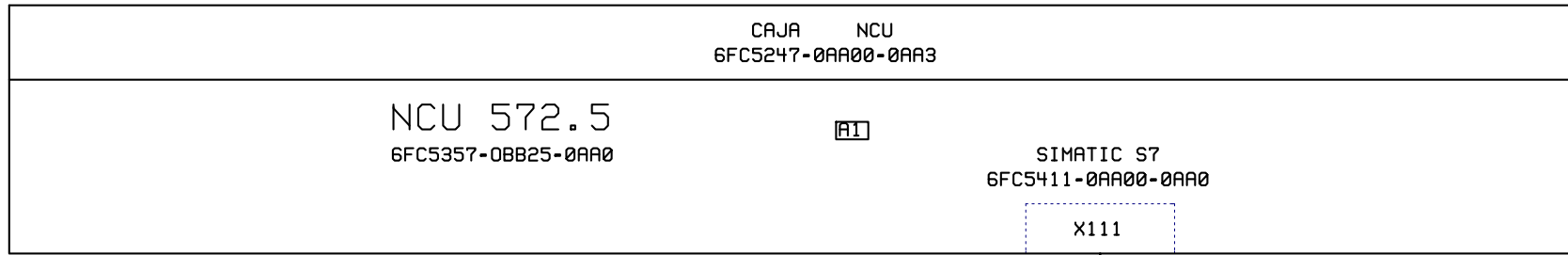
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Nº ESQUEMA 0000-0000-0001

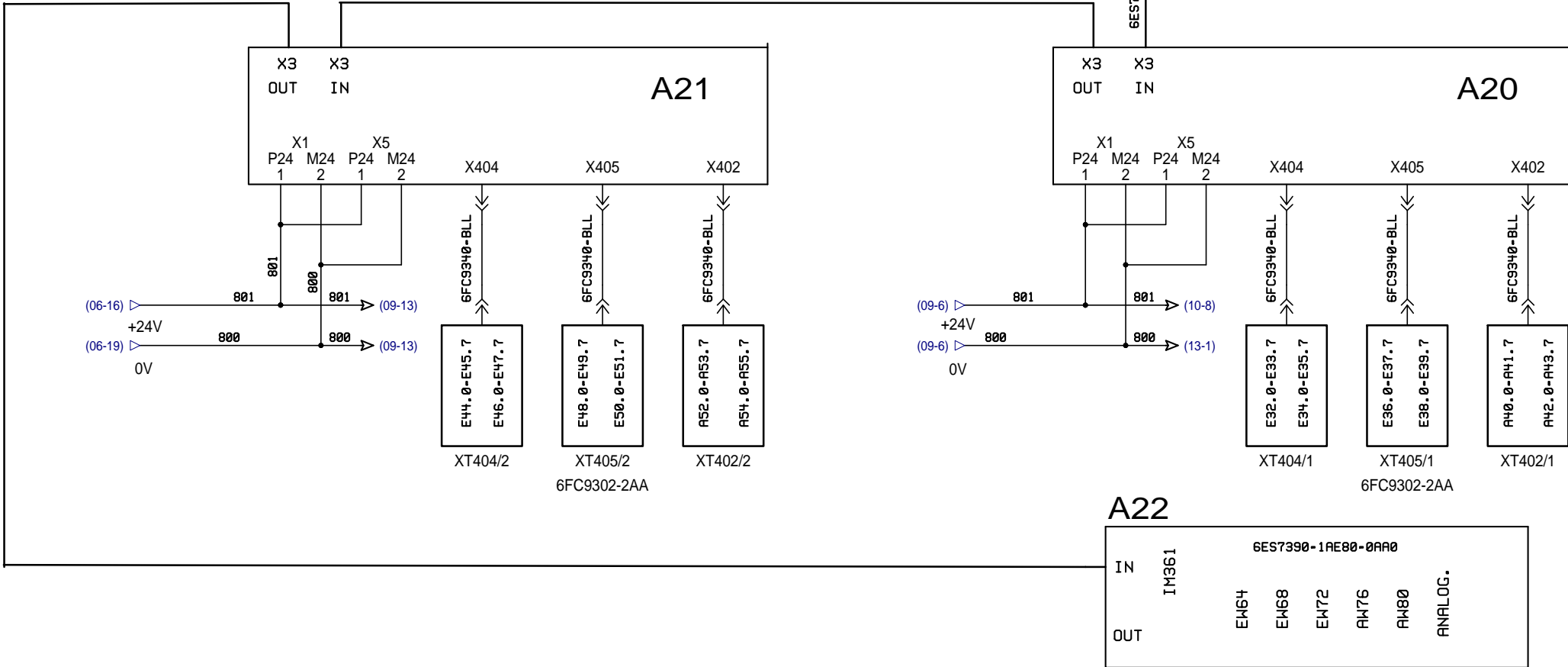
**CLIMATIZADOR
ALUMBRADO TRASERO**

GRUPO / FOLIO / TOTAL
H / 07 / 29



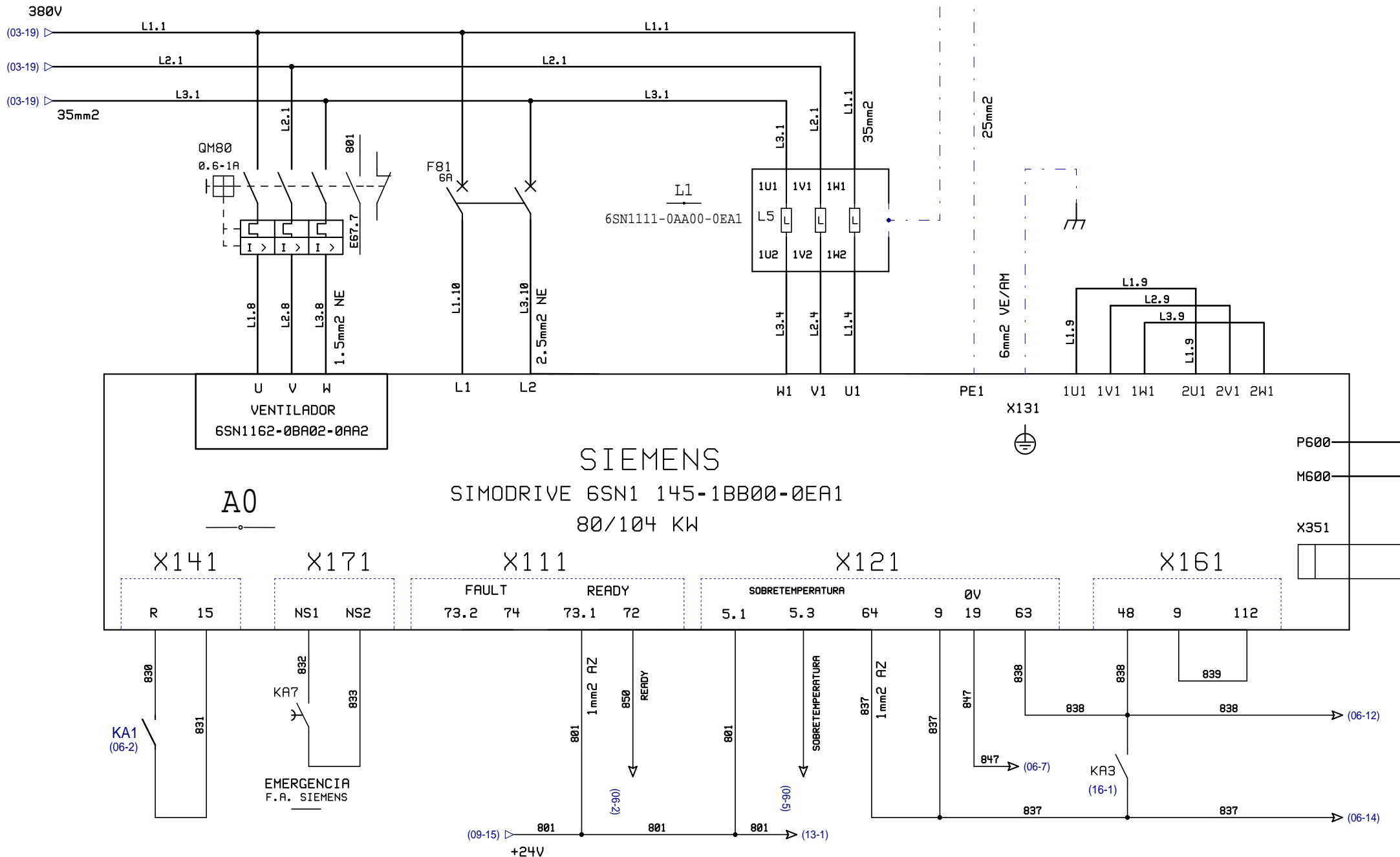


6ES7368-3BF01-0AA0



DIBUJADO FECHA	OSCAR 01-10-2007	MODELO	MODELO MAQUINA
VERIFICADO FECHA	OSCAR 02/11/2009	Nº ESQUEMA	0000-0000-0001

DIAGRAMA CONEX. 840D



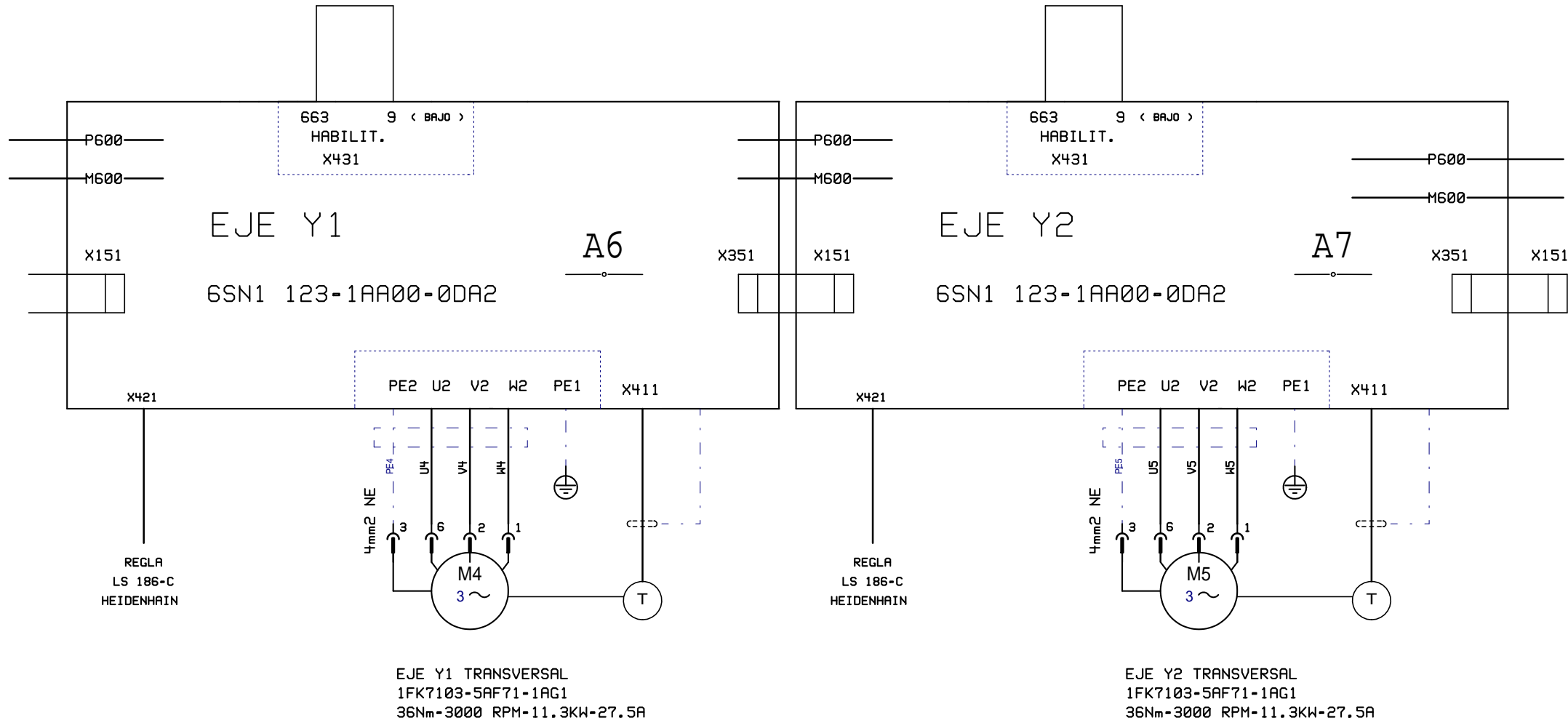
DIBUJADO OSCAR
FECHA 01-10-2007

VERIFICADO OSCAR
FECHA 02/11/2009

MODELO MODELO MAQUINA

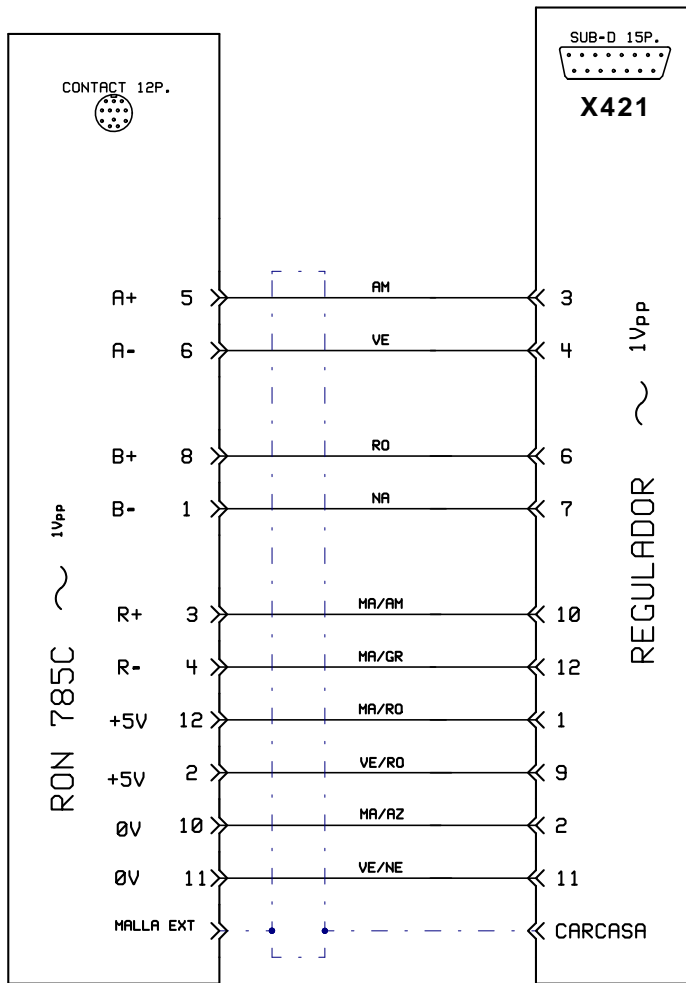
Nº ESQUEMA 0000-0000-0001

F. ALIMENTACION

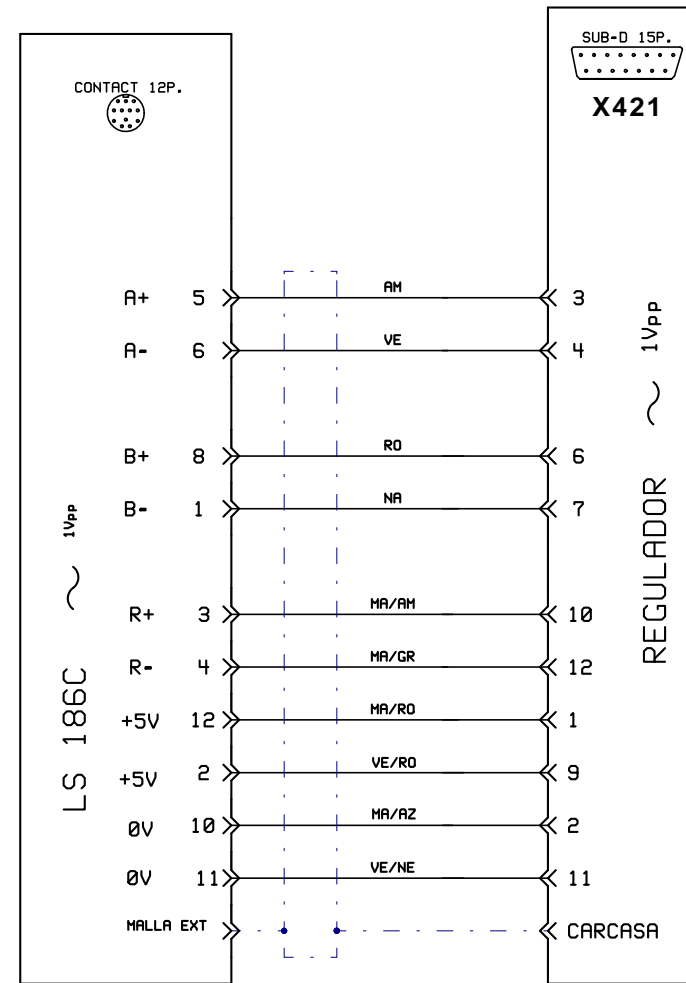


DIBUJADO FECHA	OSCAR 01-10-2007	MODELO	MODELO MAQUINA
VERIFICADO FECHA	OSCAR 02/11/2009	Nº ESQUEMA	0000-0000-0001

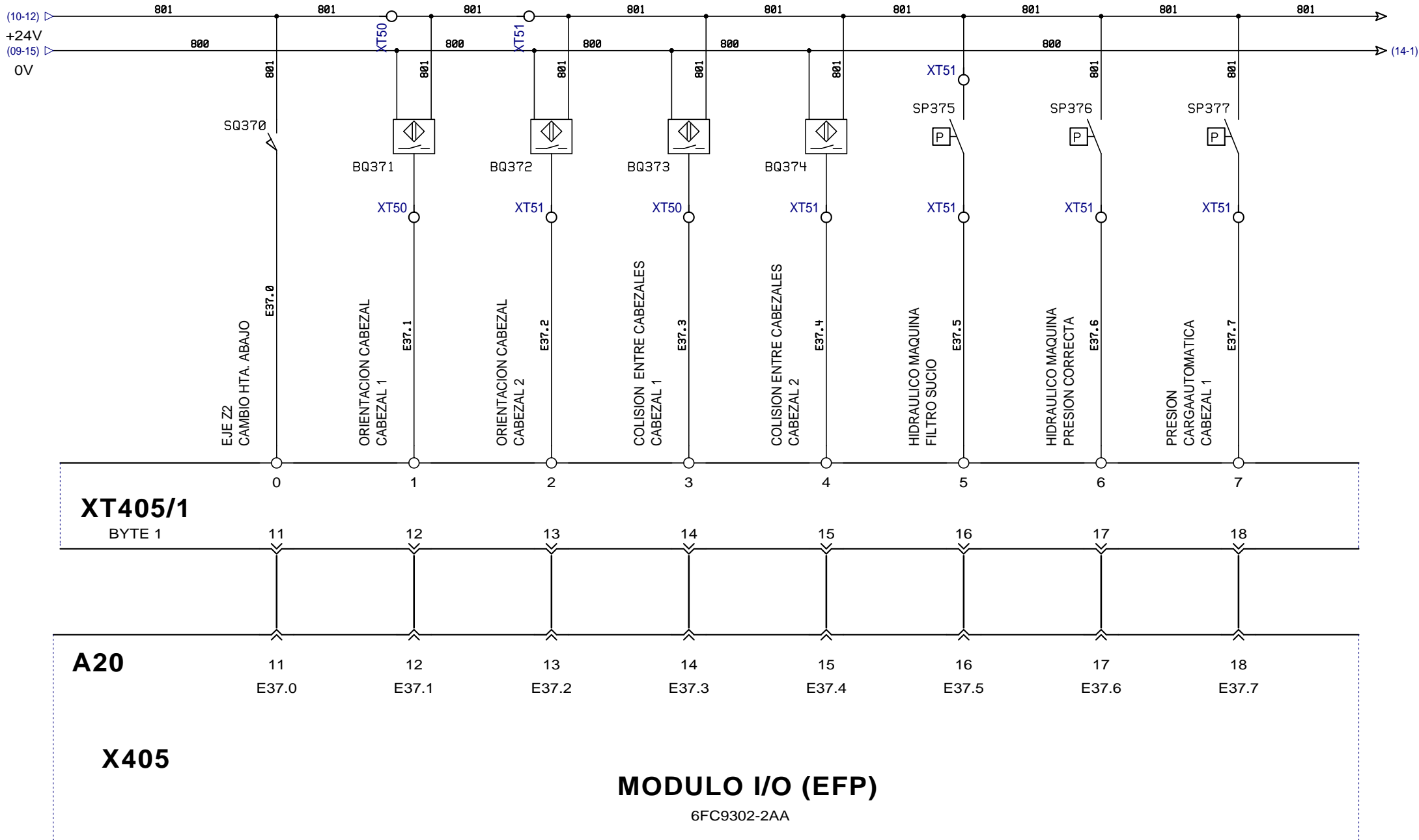
EJES Y1-Y2



CAPTACION EJE C



CAPTACION EJES Y1-Y2



DIBUJADO OSCAR
FECHA 01-10-2007

VERIFICADO OSCAR
FECHA 02/11/2009

MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

ENTRADAS PLC
E37.0-E37.7

GRUPO / FOLIO / TOTAL
H / 13 / 29

◀ 12 14 ▶

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A20

MODULO I/O (EFP)

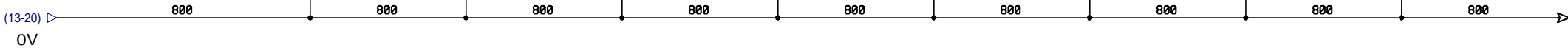
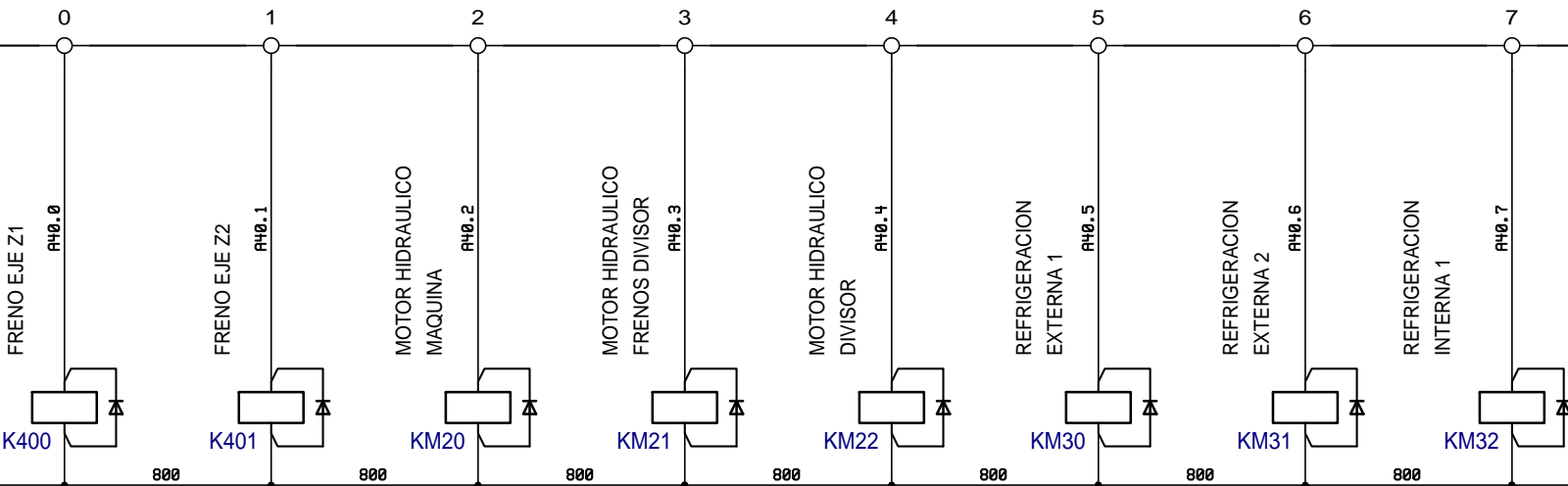
6FC9302-2AA

X402



XT402/1

BYTE 0



NA	NC
(07-13)	- -
(07-17)	- -

NA	NC
(07-16)	- -
(07-19)	- -

NA	NC
- -	- -
- -	- -
- -	- -

NA	NC
- -	- -
- -	- -
- -	- -

NA	NC
- -	- -
- -	- -
- -	- -

NA	NC
P(03-4)	- -
P(03-4)	- -
P(03-4)	- -
- -	- -

NA	NC
P(03-7)	- -
P(03-7)	- -
P(03-7)	- -
- -	- -

NA	NC
P(03-11)	- -
P(03-11)	- -
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DIBUJADO OSCAR
FECHA 01-10-2007

VERIFICADO OSCAR
FECHA 02/11/2009

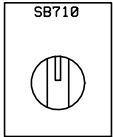
MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

SALIDAS PLC
A40.0-A40.7

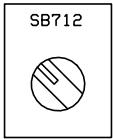
CABEZAL 1

GIRO ALMACEN



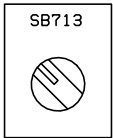
E71.0 - 91
E71.1 - 91
100 - 150

EXTRACTOR DE VAHO



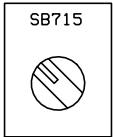
E71.2 - 91

SINFIN



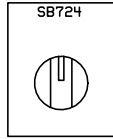
E71.3 - 91
E71.4 - 91

ALUMBRADO



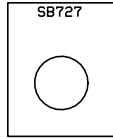
E71.5 - 91

CANALES CNC



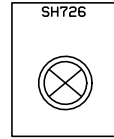
E72.4 - 91
E72.5 - 91

PARO CICLO



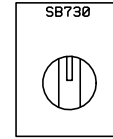
E72.7 - 91

MARCHA CICLO



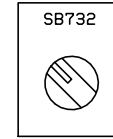
E72.6 - 91
100 - 152

GARRAS PLATO



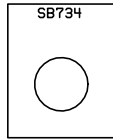
E73.0 - 91
E73.1 - 91
100 - 153

AMARRA HTA.



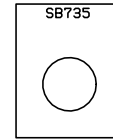
E73.2 - 91

CERRAR PUERTA



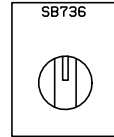
E73.4 - 91

ABRIR PUERTA



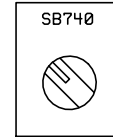
E73.5 - 91

EXTRACTOR DE VIRUTAS



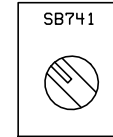
E73.6 - 91
E73.7 - 91

PISTOLA DE AGUA



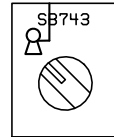
E74.0 - 91

LASER



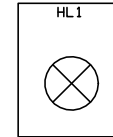
E74.1 - 91

ABRIR PUERTAS



E74.3 - 91

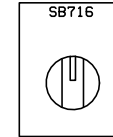
FEED HOLD



100 - 154

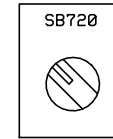
CABEZAL 2

GIRO ALMACEN



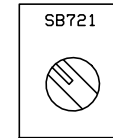
E71.6 - 91
E71.7 - 91
100 - 151

EXTRACTOR DE VAHO



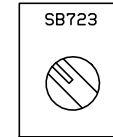
E72.0 - 91

SINFIN



E72.1 - 91
E72.2 - 91

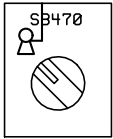
ALUMBRADO



E72.3 - 91

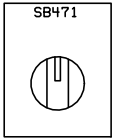
BOTONERA ALMACEN 1

ABRIR PUERTAS



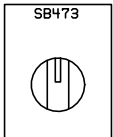
E47.0 - 91

GIRO ALMACEN IZDA/DCHA



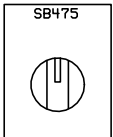
E47.1 - 91
E47.2 - 91

ALMACEN SUBIR/BAJAR



E47.3 - 91
E47.4 - 91

ALMACEN ENTRAR/SALIR



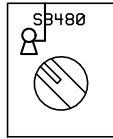
E47.5 - 91
E47.6 - 91



865 - 863
E46.4 - E46.3

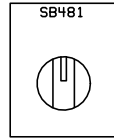
BOTONERA ALMACEN 2

ABRIR PUERTAS



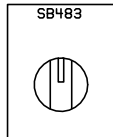
E48.0 - 91

GIRO ALMACEN IZDA/DCHA



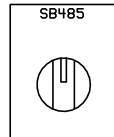
E48.1 - 91
E48.2 - 91

ALMACEN SUBIR/BAJAR



E48.3 - 91
E48.4 - 91

ALMACEN ENTRAR/SALIR



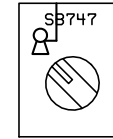
E48.5 - 91
E48.6 - 91



863 - 861
E46.3 - E46.2

BOTONERA TRASERA

ABRIR PUERTAS



E74.7 - 91



859 - 857
E46.1 - E46.0

A

B

C

D

E

F

G

H

I

J

BORNA PLC	PAG.	Nº HILO	SIMB.	TEXTO FUNCION
		1		
X0.0	11	2	KA1100	SERVICIO GENERAL OK
X0.1	52	3	KM5000	NO POWER REG. FANUC
X0.2		4		
X0.3	15	5	KA1501	HANDWHEEL ENABLED
X0.4	91	6	SQ9143	BOTONERA CARGA / DESCARGA ABATIDA
X0.5		7		
X0.6		8		
X0.7		9		
X1.0		10		
X1.1	18	11	SB1841	ABRIR PUERTA TRASERA
X1.2	17	12	KA1701	PUERTA ACCESO HTA. CERRADA BLOQ.
X1.3	18	13	KA1801	PUERTA TRASERA CERRADA BLOQ.
X1.4	21	14	KA1411	MODO SEMI
X1.5	21	15	KA1412	MODO AUTO
X1.6	13	16	SA1300	MAQUINA INTEGRADA EN CELULA
X1.7	21	17	KA1410	MODO SETTING

BORNA PLC	PAG.	Nº HILO	SIMB.	TEXTO FUNCION
		1		
X4.0	32	2	QM3100	FALLO TERMICO ENGRASE MAQUINA
X4.1	32	3	SL3241	NIVEL ENGRASE MAQUINA OK
X4.2	32	4	SP3242	PRESION ENGRASE MAQUINA OK
X4.3		5		
X4.4	90	6	QM9000	TERMICO EXTRACTOR DE VAHOS
X4.5		7		
X4.6	20	8	KA1901	BARRERA PROTECCION CERRADA
X4.7	73	9		MEASURING PROBE
X5.0	10	10	FR1000	CURRENT SUPPLY SOLENOIDVALVES
X5.1	37	11	SL3754	TERMPERATURA MOTOR REFRIGERACION ALTA PRESION
X5.2	37	12	QM3400	TERMICO REFRIGERACION ALTA PRESION 28 BAR
X5.3	37	13	QM3401	TERMICO REFRIGERACION ALTA PRESION 14 BAR
X5.4	37	14	QM3402	TERMICO REFRIGERACION BAJA PRESION
X5.5	37	15	QM3500	TERMICO TRANSVASE
X5.6	37	16	QM3501	TERMICO LIMPIEZA TAMBOR
X5.7	37	17	QM3502	TERMICO TAMBOR

BORNA PLC	PAG.	Nº HILO	SIMB.	TEXTO FUNCION
		1		
X2.0	91	2	SH9140	ATAR PIEZA OP-10
X2.1	91	3	SB9141	SOLTAR PIEZA OP-10
X2.2	91	4	SH9142	AUTORIZACION CICLO
X2.3	29	5	KM2800	HIDRAULICO
X2.4	29	6	QM2800	TERMICO HIDRAULICO
X2.5	29	7	SP2942	PRESION HIDRAULICO OK
X2.6	29	8	SF2943	FILTRO HIDRAULICO NO SUCIO
X2.7		9		
X3.0	91	10	SH9144	ATAR PIEZA OP-20
X3.1	29	11	SL2944	NO NIVEL MIN. HIDRAULICO
X3.2	29	12	ST2945	TEMPERATURA OK
X3.3	29	13	ST2945	TEMPERATURA ALTA GRUPO HIDRAULICO
X3.4	27	14	SP2740	PRESION GENERAL AIRE
X3.5		15		
X3.6	38	16	SB3840	REVERSE CONVEYOR
X3.7	38	17	SQ3841	CONVEYOR BLOCKED CONTROL

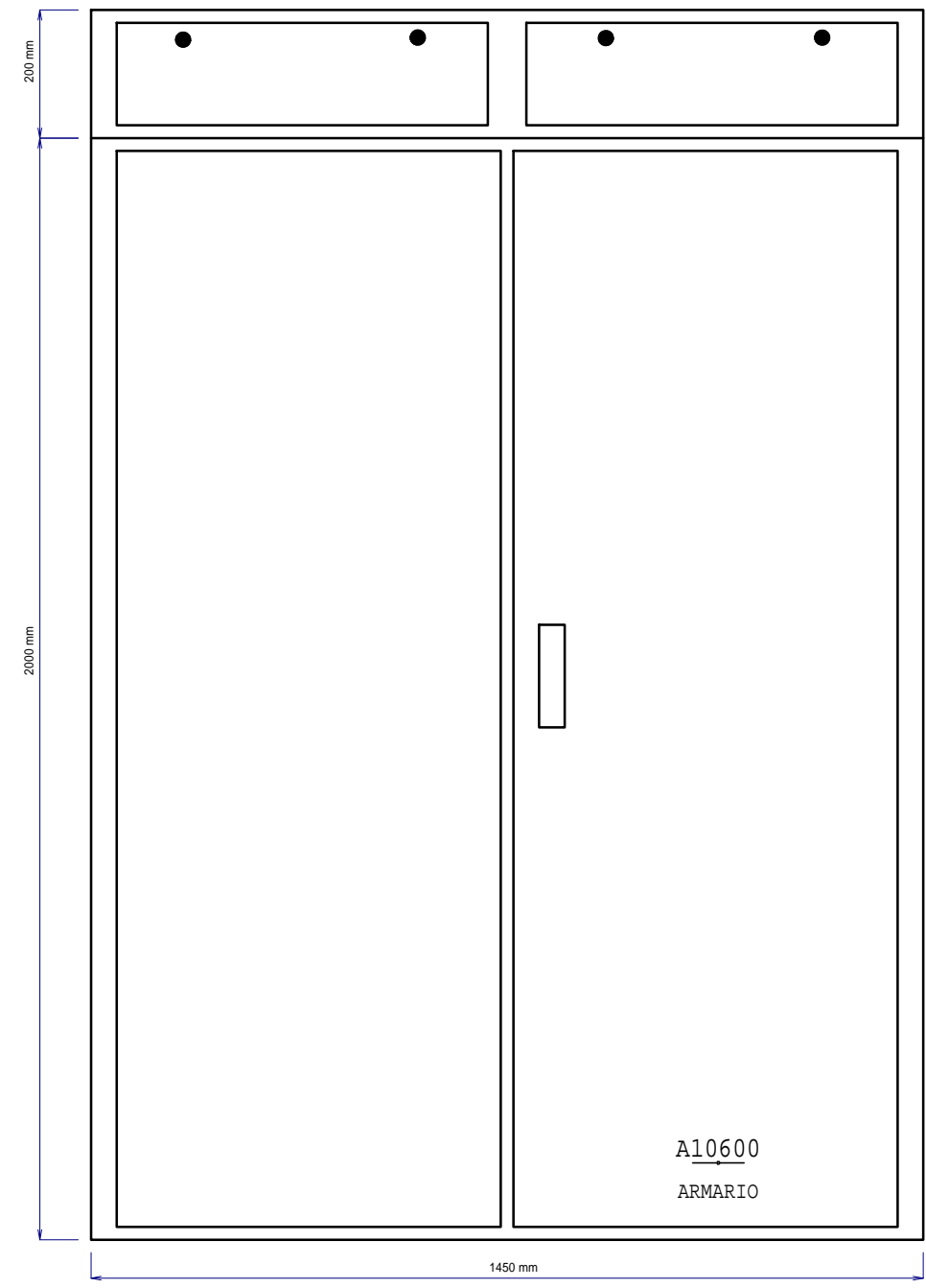
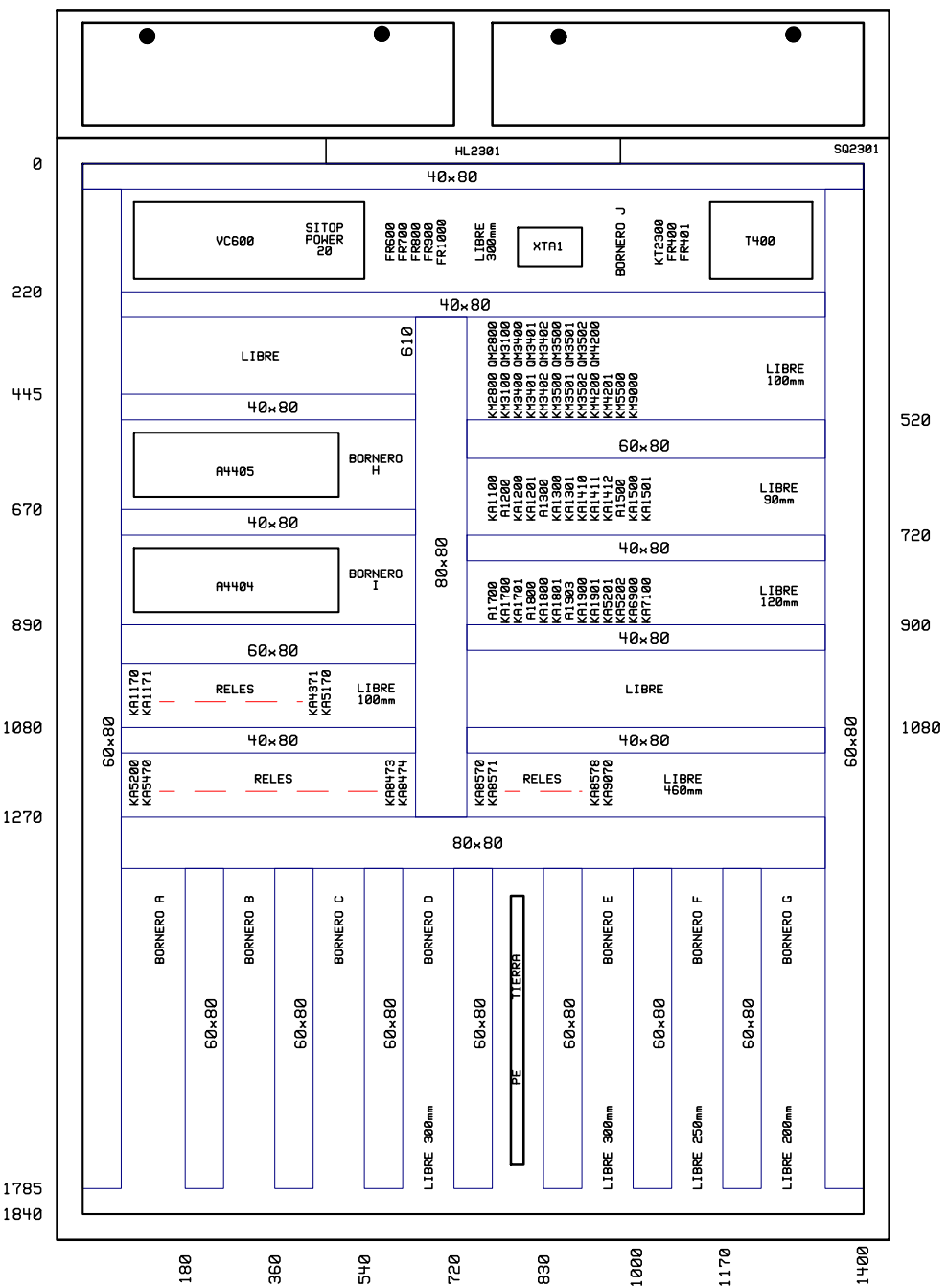
BORNA PLC	PAG.	Nº HILO	SIMB.	TEXTO FUNCION
		1		
X6.0	37	2	SL3746	CAUDAL BAJA PRESION
X6.1	37	3	SL3747	CAUDAL ALTA PRESION
X6.2	37	4	SL3748	CAUDAL LIMPIEZA TAMBOR
X6.3	37	5	SL3749	NIVEL MIN. DE LIMPIO
X6.4	37	6	SL3750	NIVEL MAX. DE LIMPIO
X6.5	37	7	SL3751	NIVEL MAX. DE SUCIO
X6.6	37	8	SL3752	NIVEL ALARMA TAMBOR
X6.7	37	9	SL3753	NIVEL PARADA TAMBOR
X7.0		10		
X7.1		11		
X7.2		12		
X7.3	56	13		NIVEL REFRIGERACION CABEZAL OK
X7.4	56	14	KM5500	REFRIGERACION CABEZAL EN MARCHA
X7.5	56	15	QM5500	TERMICO REFRIGERACION CABEZAL
X7.6	56	16	N5500	TEMPERATURA REFRIGERACION CABEZAL OK
X7.7	56	17	SL5644	CAUDAL REFRIGERACION CABEZAL OK



DIBUJADO FECHA	OSCAR 01-10-2007	MODELO	MODELO MAQUINA
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RESUMEN X/Y PLC

2000x1450x350







































DIBUJADO OSCAR
FECHA 01-10-2007
VERIFICADO OSCAR
FECHA 02/11/2009

MODELO MODELO MAQUINA
Nº ESQUEMA 0000-0000-0001

ARMARIO - MANIOBRA

GRUPO / FOLIO / TOTAL
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◀ 17 19 ▶
Programa SEE Electrical Expert v. 3.60

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
A																				
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-  FAULT RESET
-  MACHINE IN SERVICE
-  ACTION
-  REVERSE ACTION
-  PORTABLE PANNEL CONNECTION
-  SETTING-MANU-AUTO
-  MACHINE LIGHTING
-  CYCLE START
-  CONFIRMATION OPERATOR NOT INSIDE
-  TOOL LOCKING
-  TOOL UNLOCKING
-  GENERAL RETURN
-  LOCAL / CELL
-  PART TYPE CONFIRMATION
-  PART TYPE SELECTION
-  PART CLAMPING
-  PART UNCLAMPING
-  OPEN DOORS
-  EMERGENCY
-  POWER ON
-  POWER OFF
-  REFERENCE
-  LUBRICATION START
-  COOLANT ON/OFF
-  CLOSE DOOR
-  OPEN SIDE DOOR
-  OPEN ACCESS TOOL DOOR
-  FOWARD SWARF CONVEYOR
-  REVERSE SWARF CONVEYOR
-  LAMP TEST
-  MACHINE EMPTYING
-  SECURITY CANCEL
-  CELL CYCLE ENABLE
-  OPEN REAR DOOR
-  OPEN DOOR
-  CLOSE ACCESS TOOL DOOR

* NOTE: SOME OF THE COMMANDS IN THIS INDEX CORRESPOND TO OPTIONAL DEVICES AND CAN NOT BE INSTALLED DEPENDING ON THE MACHINE CONFIGURATION



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MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

BOTONERA GENERAL

1	CNC & DRIVES DS500HS3 180iB-B-MPP360-I-GMN		
2	CODE D+S: E2003FAN007		
3			
4	Quantity	PartNumber	Description
5	6	A03B0807-J154	16 OUTPUT MODULE 0.5A
6	1	A02B-0236-C205	Separate Detector Interface Unit
7	1	A02B-0283-B801	Basic Unit, 1 Slot
8	1	A02B-0281-H115	Power Supply Unit
9	1	A02B-0283-H002	CPU Card, PENTIUM®, DRAM 32 MB
10	1	A02B-0283-H200	Main CPU Board
11	1	A02B-0281-H046	Memory G, FROM/SRAM, 32M/512KB
12	1	A02B-0281-H084	Servo Control Card, 8 Axes, 6 Axes for Dual Check Safety
13	1	A02B-0281-H034	MDI Card C1/D1 for is-MODEL B, with Ethernet
14	1	A02B-0281-J571/656A	Control Software, for Embedded Ethernet
15	1	A02B-0284-H501/BDH1	Basic Function
16	1	A02B-0284-J501/BDH1	Option Assembly 1
17	1	A02B-0284-J502/BDH1	Option Assembly 2
18	1	A02B-0236-H590/90B0	Digital Servo Function
19	1	A02B-0281-H580/406G	PMC-SB7 Function
20	1	A02B-0283-H984	PMC-SB7 Ladder 24,000 Steps
21	1	A02B-0239-H193	Name Plate, GE Fanuc 180i-M
22	1	A02B-0265-H171	Name Plate, GE Fanuc
23	1	A02B-0265-J193	Blank Panel C
24	1	A02B-0281-J207	CNC Side HSSB Interface Board, Type 2
25	1	A13B-0193-B032	CNC Display Unit 6, Windows® 2000 Professional, 10.4" Color, Softkeys
26	1	A08B-0082-H005	Main Memory 2, 128MB
27	1	A08B-0082-H040	CPU Card B2-10, CELERON, 10.4" LCD
28	1	A08B-0082-H110	Hard-Disk Unit, for Mounting to Basic Unit
29	1	A08B-0082-J002	PCI Extension Board, Fitting Plate 2
30	1	A08B-0082-J005	Cover for PCI Extension Board
31	1	A02B-0207-K793	Panel i Driver Disk
32	1	A02B-0207-K730	FOCAS1/HSSB for Windows® 95/Windows® NT
33	1	A02B-0281-J316	PROFIBUS Interface Board, Slave
34	1	A02B-0222-J535/6557	PROFIBUS Application Software
35	1	A02B-0236-J563/6553	PROFIBUS Slave Firmware
36	1	A02B-0284-S732	PROFIBUS DP Slave Function
37	1	A02B-0236-C230	Operator's Panel (Main Panel A)



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LISTA FANUC

GRUPO / FOLIO / TOTAL

H / 20 / 29

◀ 19 21 ▶

DENOMINACION	CANTIDAD	REFERENCIA	DESCRIPCION	FOLIO	FABRICANTE	LOCALIZACION
A0	1	6SN1145-1BA01-	MODULO ALIMENTACION 55KW	36	SIEMENS	
A1	1	6FC5357-0BB33-		37		
A2	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	38	SIEMENS	
A3	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	39	SIEMENS	
A4	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	40	SIEMENS	
A5	1	6SN1112-1AC01-	MODULO VIGILANCIA	41	SIEMENS	
A6	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	42	SIEMENS	
A7	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	42	SIEMENS	
A8	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	43	SIEMENS	
A9	1	6SN1123-1AA00-	REGULADOR AVANCE INTERFA.CONFORTABLE	43	SIEMENS	
EV1	1	SK 3304	CLIMATIZADOR PARED	21	RITTAL	
F1	1	20874	MAGNETOTERMICO BI C32N 10A CURVA D	15	MERLIN G	
F3	1	27884	MAGNETOTERMICO I-4A CURVA C	15	MERLIN-G	
F4	1	20874	MAGNETOTERMICO BI C32N 10A CURVA D	14	MERLIN G	
F5	1	27885	MAGNETOTERMICO I-6A CURVA C	14	MERLIN-G	
F6	1	24628	MAGNETOTERMICO I-4A	14	MERLIN-G	
F7	1	27882	MAGNETOTERMICO I-2A CURVA C	14	MERLIN-G	
GS1	1	8708680000	ALIMENTACION 24VDC 10A	15	SIEMENS	
GS2	1	8708680000	ALIMENTACION 24VDC 10A	15	SIEMENS	
HL1	1	DL1CE		22		
KM21	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	58	TELEMECANIQUE	
KM22	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	58	TELEMECANIQUE	
KM30	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	58	TELEMECANIQUE	
KM31	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	58	TELEMECANIQUE	
KM32	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	58	TELEMECANIQUE	
KM33	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	59	TELEMECANIQUE	
KM34	1	LP4.KO910BW3	CONTACTOR 4KW / 24VDC	59	TELEMECANIQUE	



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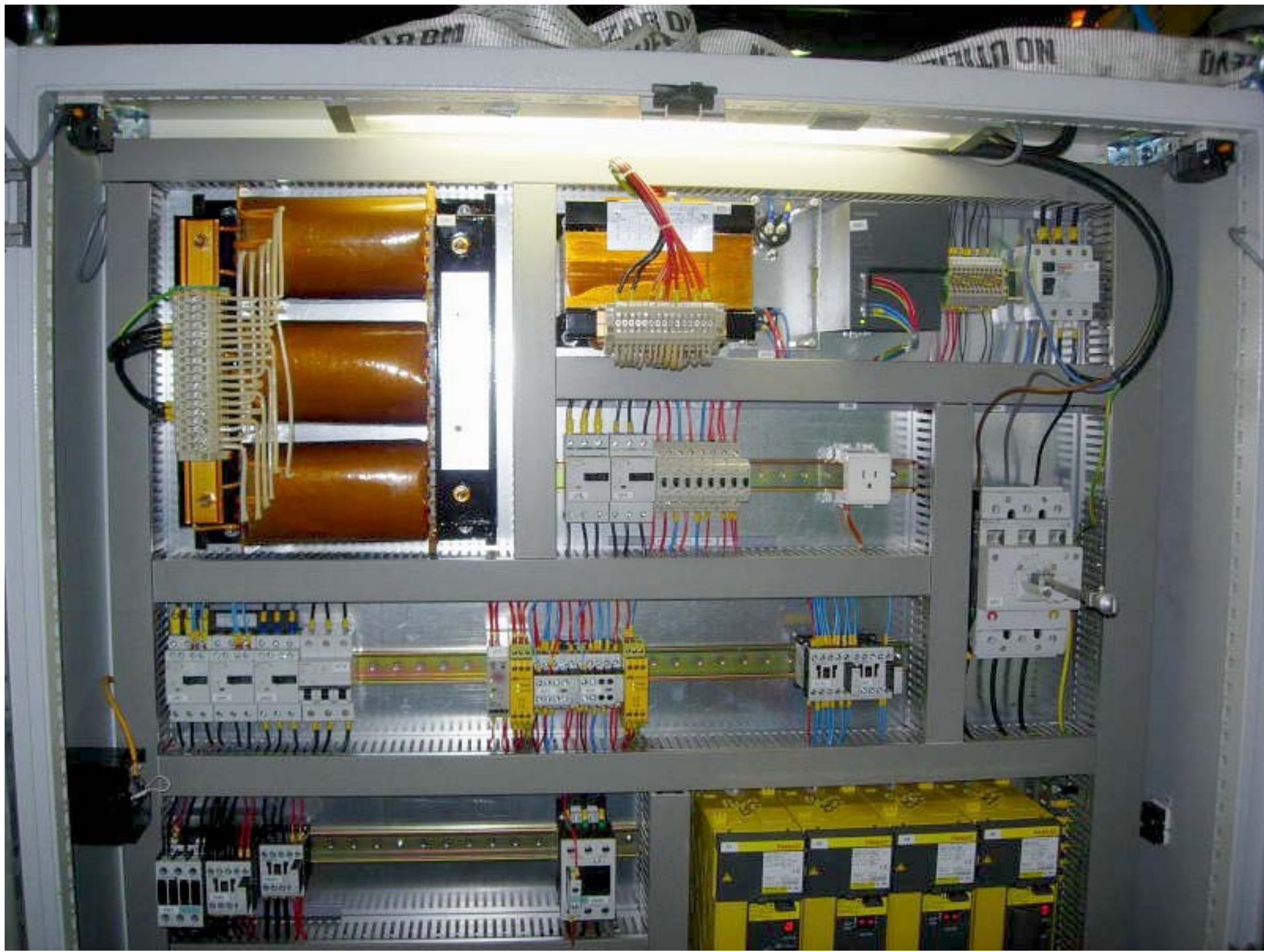
MODELO MODELO MAQUINA

Nº ESQUEMA 0000-0000-0001

LISTA MATERIAL

GRUPO / FOLIO / TOTAL

H / 21 / 29



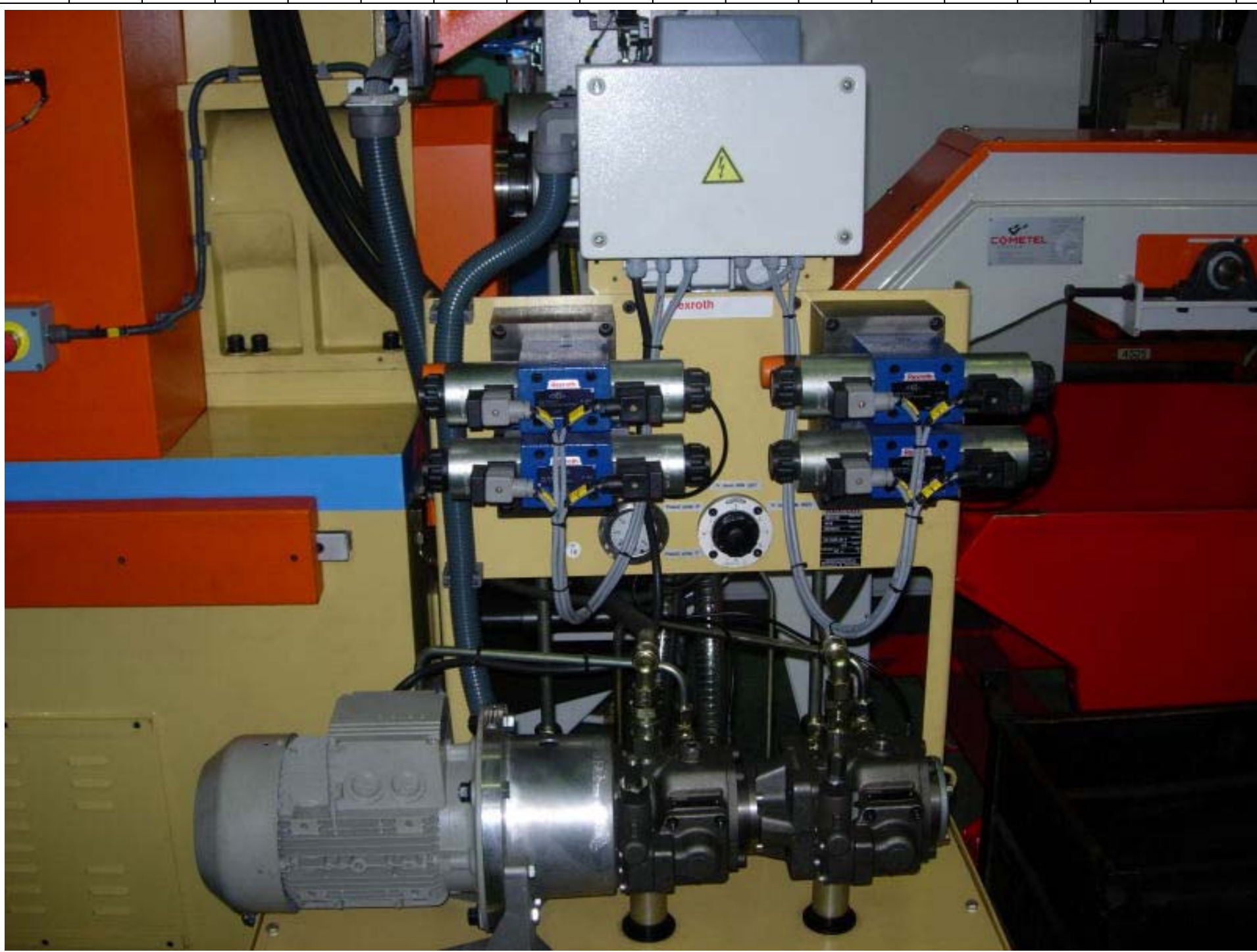
DIBUJADO FECHA	OSCAR 01-10-2007	MODELO	MODELO MAQUINA
VERIFICADO FECHA	OSCAR 02/11/2009	Nº ESQUEMA	0000-0000-0001

**FOTOS MAQUINA
EXTERIOR ARMARIO**



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VERIFICADO FECHA	OSCAR 02/11/2009	Nº ESQUEMA	0000-0000-0001

**FOTOS MAQUINA
DETALLE ARMARIO**



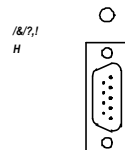
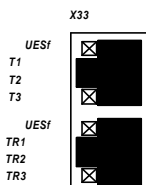
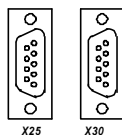
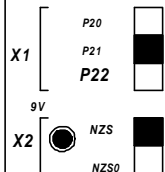
DIBUJADO FECHA	OSCAR 01-10-2007
VERIFICADO FECHA	OSCAR 02/11/2009

MODELO	MODELO MAQUINA
Nº ESQUEMA	0000-0000-0001

FOTOS MAQUINA
VISTA TRASERA BOTONERA

GRUPO / FOLIO / TOTAL		
H / 25 / 29		
◀ 24		26 ▶
Programa SEE Electrical Expert v. 3.60		

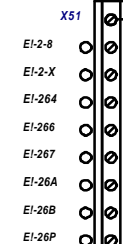
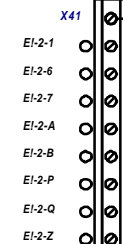
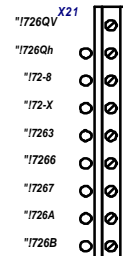
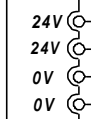
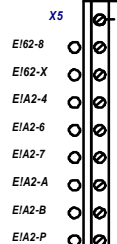
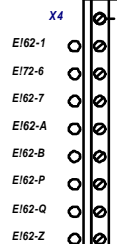
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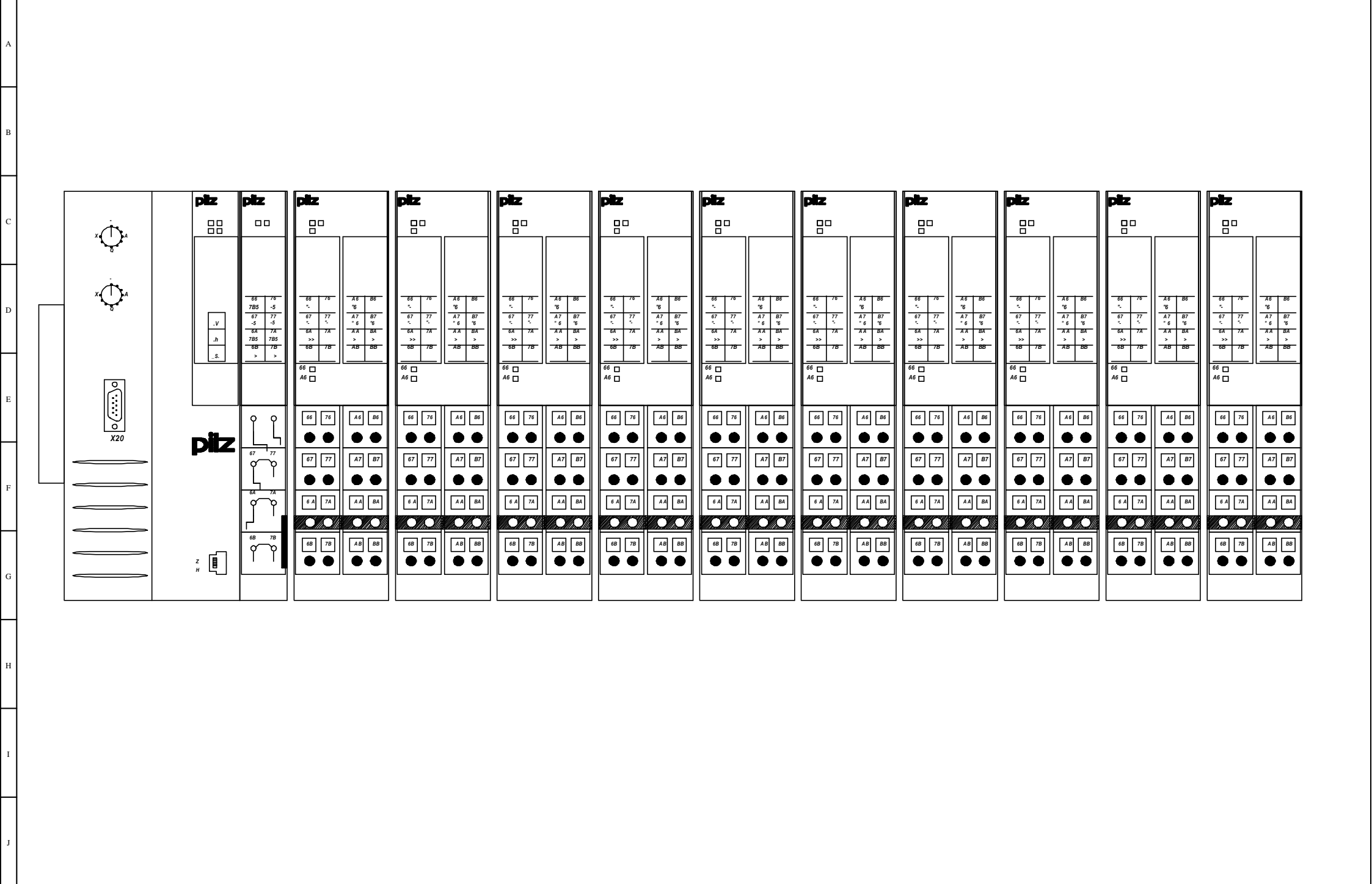


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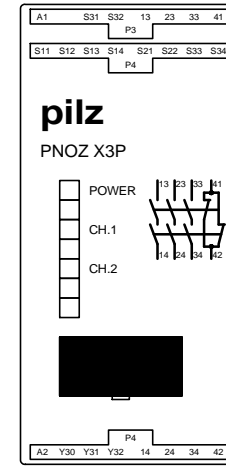
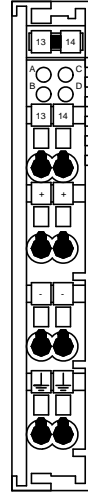
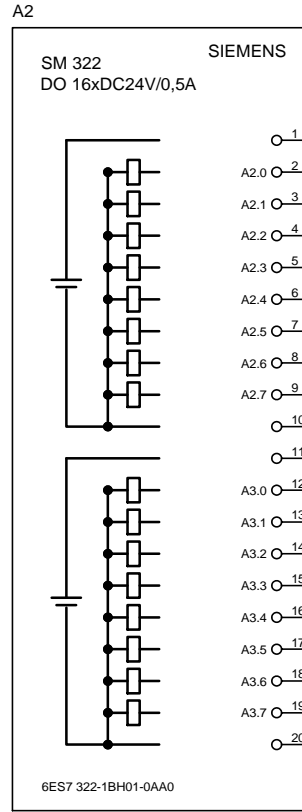
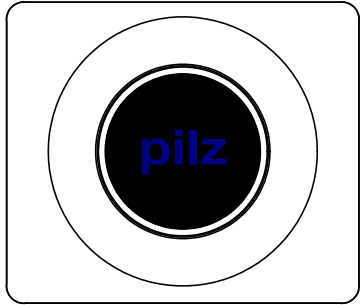
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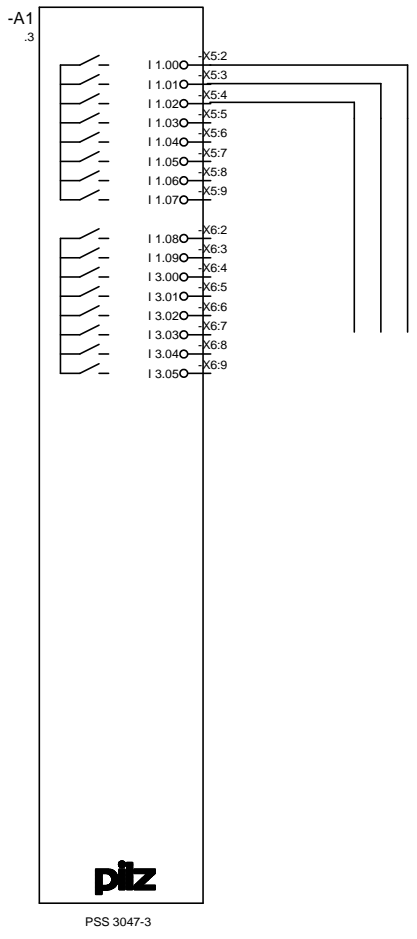
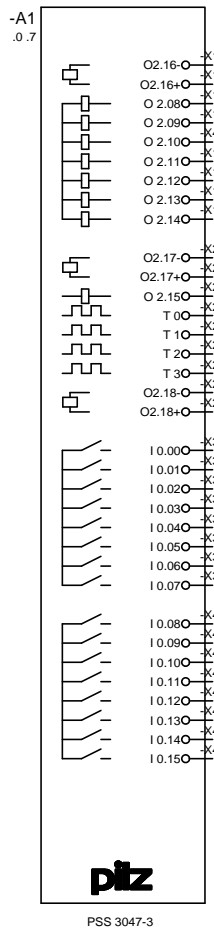
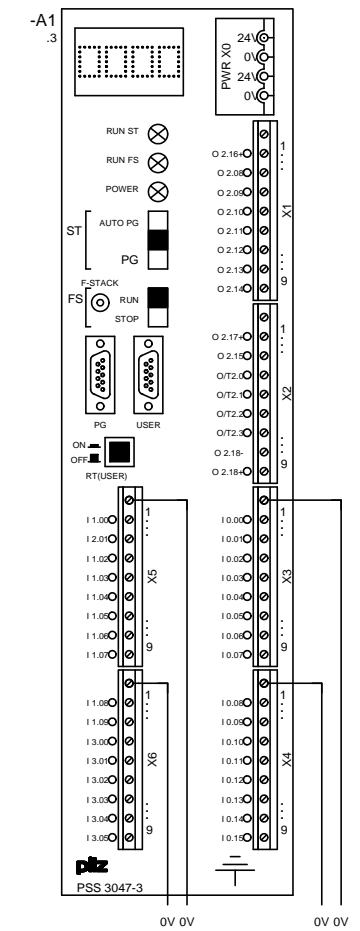




DIBUJADO FECHA	OSCAR 01-10-2007	MODELO	MODELO MAQUINA
VERIFICADO FECHA	OSCAR 02/11/2009	Nº ESQUEMA	0000-0000-0001

MACRO EPLAN





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MACRO EPLAN PILZ

GRUPO / FOLIO / TOTAL
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◀ 28 29 ▶
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