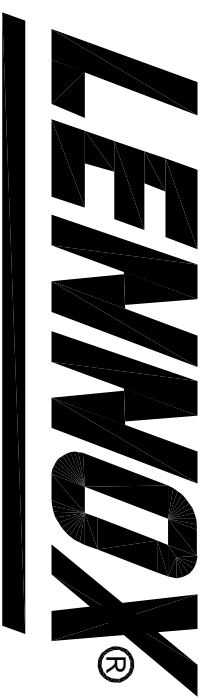


*DOSSIER ELECTRIQUE  
ELECTRICAL FILE*

A	17-02-06	Y-D	MISE A JOUR FOLIOS 1-9
Index / Index	Date	Nom / Name	Modifications



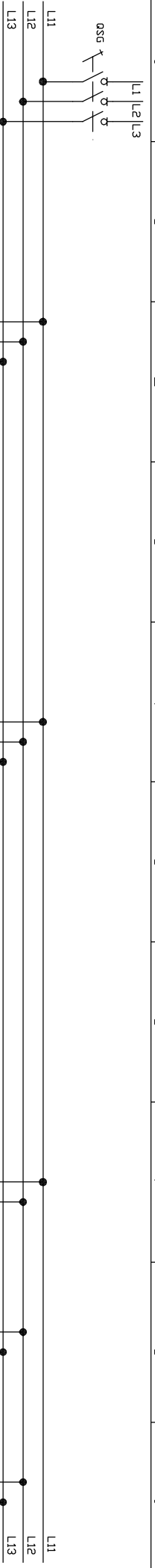
LCH 402 V K STD  
LENNDX UK

Nom: / Name:  
E-R  
Date: 17-01-2006

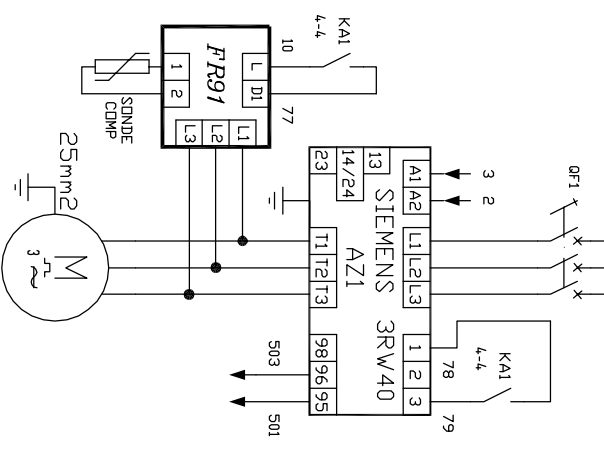
SE131971

0 / 13

0 1 2 3 4 5 6 7 8 9



400V
3.50Hz
P max
169KW
I max
299A
I dem
385A

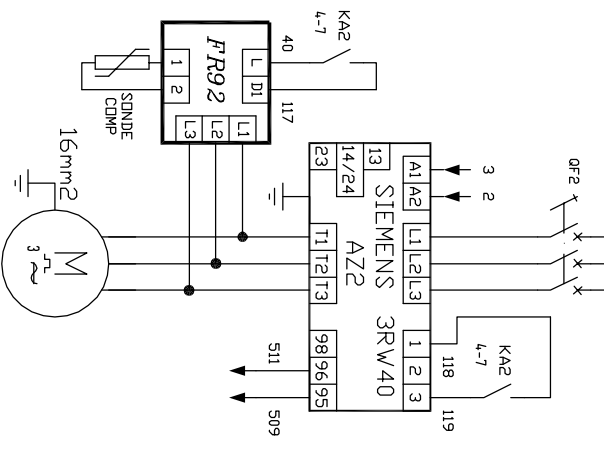


3x 2x25mm²
CSH7571-90Y
P = 89 kW
In = 148 A
Id = 222 A

REGLAGE 3RW40  
 xIe = 5  
 t Dem. = 3s  
 U = 60%  
 t Stop = 0s  
 Ie = 152A  
 Classe = 10

M1

AZ1	QF1
NO	NO
NF	NF
9-0	6-0
6-0	

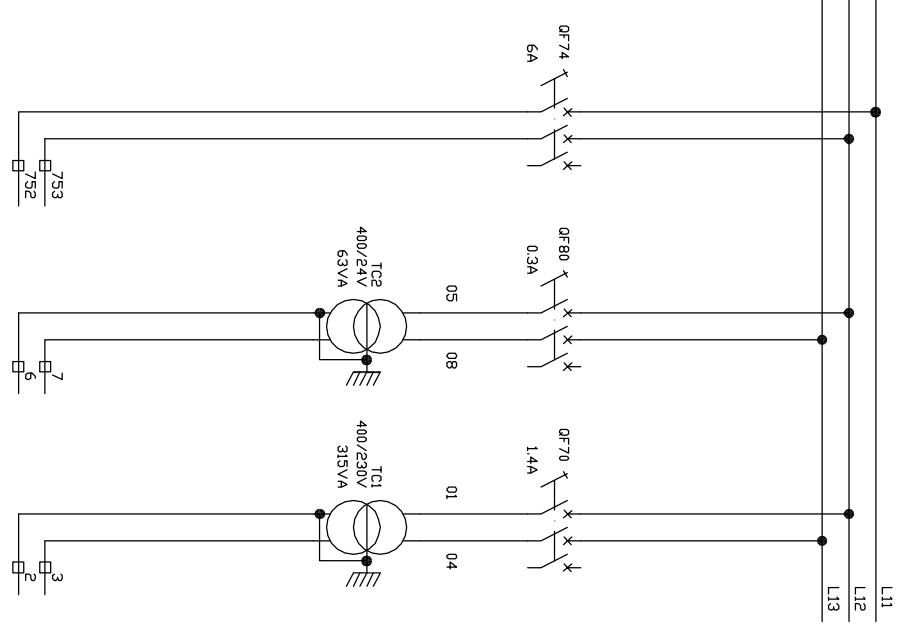


2x 3x16mm²
CSH7551-70Y
P = 66 kW
In = 107 A
Id = 161 A

REGLAGE 3RW40  
 xIe = 5  
 t Dem. = 3s  
 U = 60%  
 t Stop = 0s  
 Ie = 107A  
 Classe = 10

M2

AZ2	QF2
NO	NO
NF	NF
9-1	6-2
6-2	



QF74	
NO	NF
6-3	

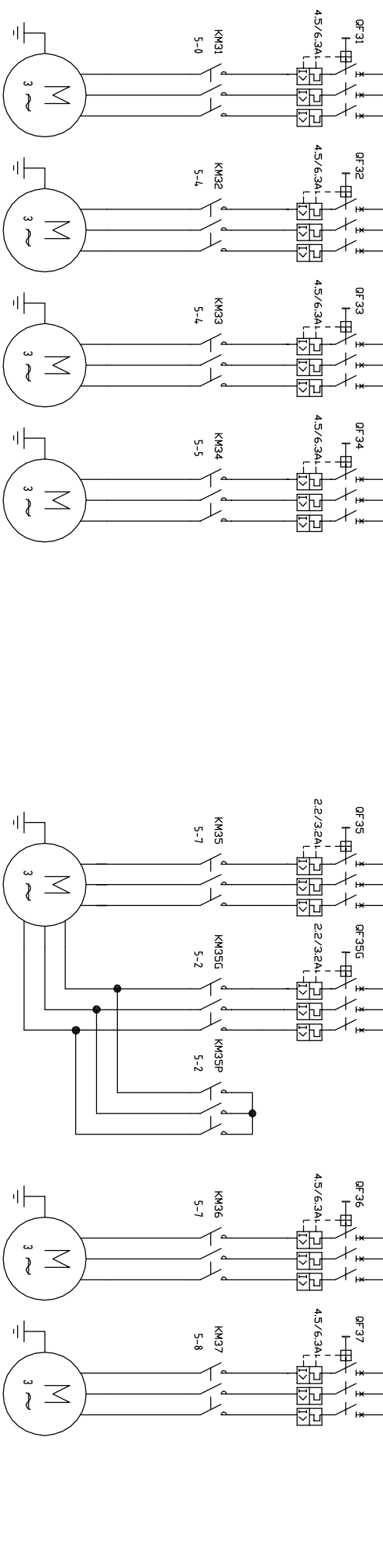
# SCHEMA ELECTRIQUE

A	17-02-06	Y-D
Indice	DATE	NOM

MISE A JOUR REPERES DE FILS 10 ET 40

MODIFICATIONS

0 1 2 3 4 5 6 7 8 9



M31 M32 M33 M34

M35 M36 M37

CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A
CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A
CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A
CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A

PV	P <sub>a</sub> =1 kW	P <sub>u</sub> =0.37 kW	In=2 A	I <sub>d</sub> =8.6 A
CM29G-670/540Tr-A/Δ	P <sub>a</sub> =1.8 kW	P <sub>u</sub> =1.1 kW	In=4.8 A	A I <sub>d</sub> =13.5 A

CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A
CM29 - 700Tr	P <sub>a</sub> =1.7 kW	P <sub>u</sub> =1.1 kW	In=5.5 A	I <sub>d</sub> =16 A

QF31	NO	NF
	9-1	

QF32	NO	NF
	9-1	

QF33	NO	NF
	9-1	

QF34	NO	NF
	9-2	

QF35	NO	NF
	5-7	9-1

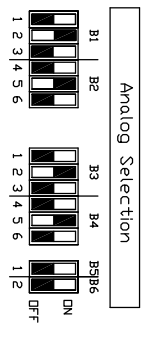
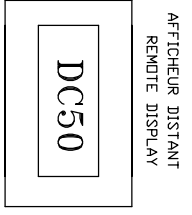
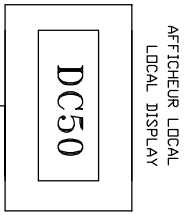
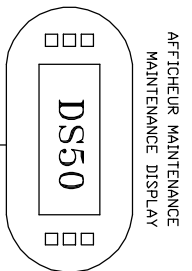
QF35G	NO	NF
	5-7	9-1

QF36	NO	NF
	9-1	

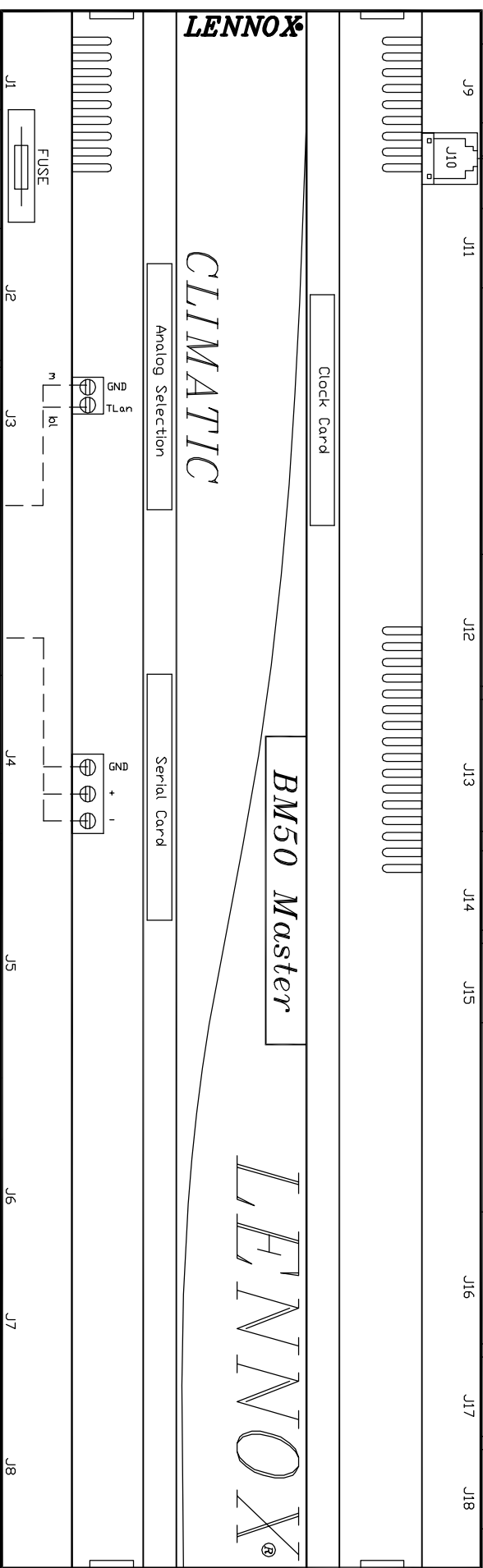
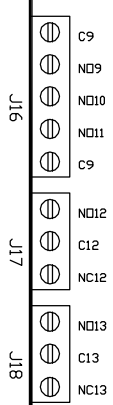
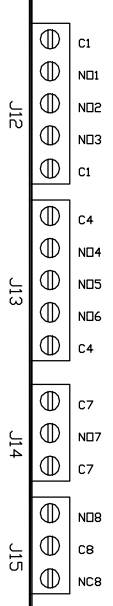
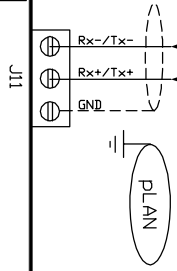
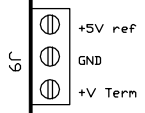
QF37	NO	NF
	9-2	

# SCHEMA ELECTRIQUE

0 1 2 3 4 5 6 7 8 9



Input B1-B2-B3-B4		Input
DN	DN	0/1V
DN	DN	NTC
DN	DN	0/20mA
DN	DN	0/5V
Input B5-B6		Input
DN	DN	digital input
DN	DN	NTC

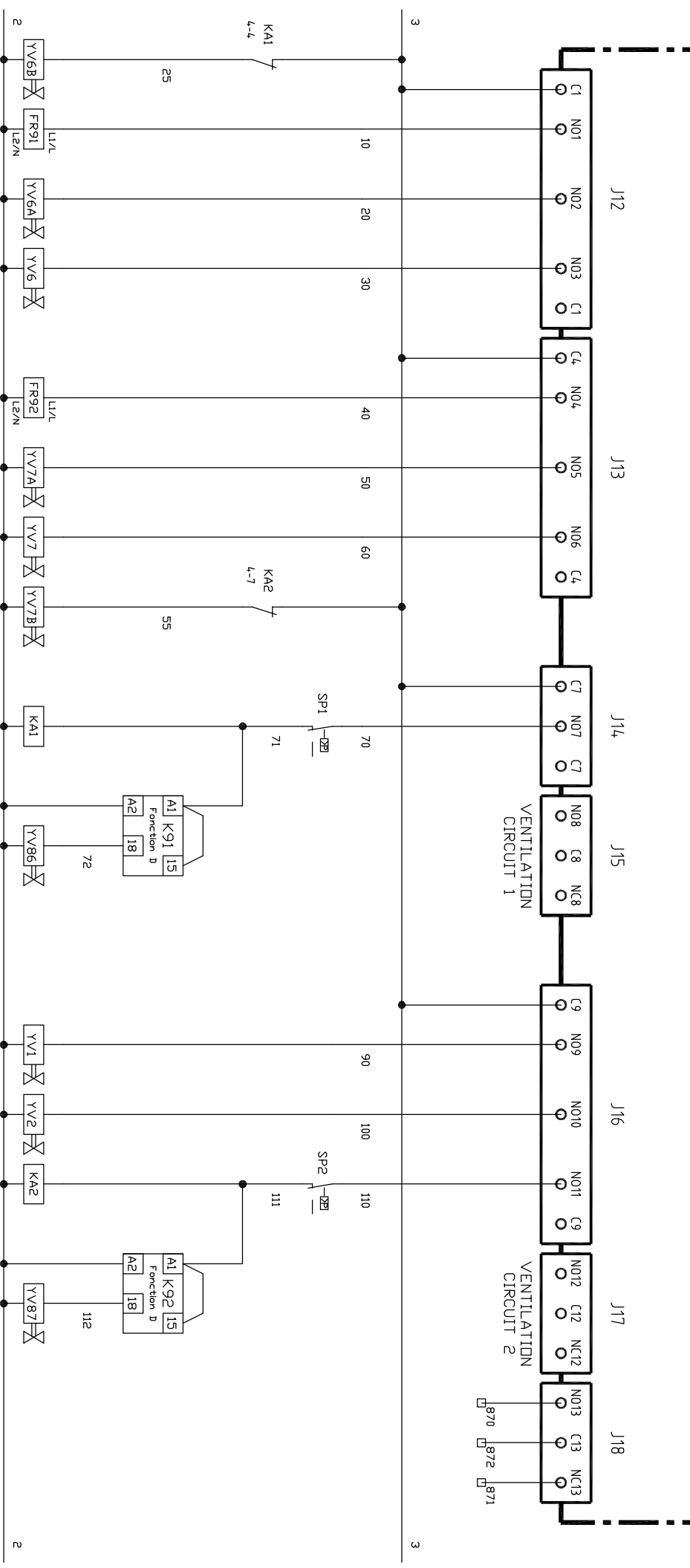


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**SCHEMA ELECTRIQUE**

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FR91	NO	NF
6-0	6-0	

FR92	NO	NF
6-2	6-2	

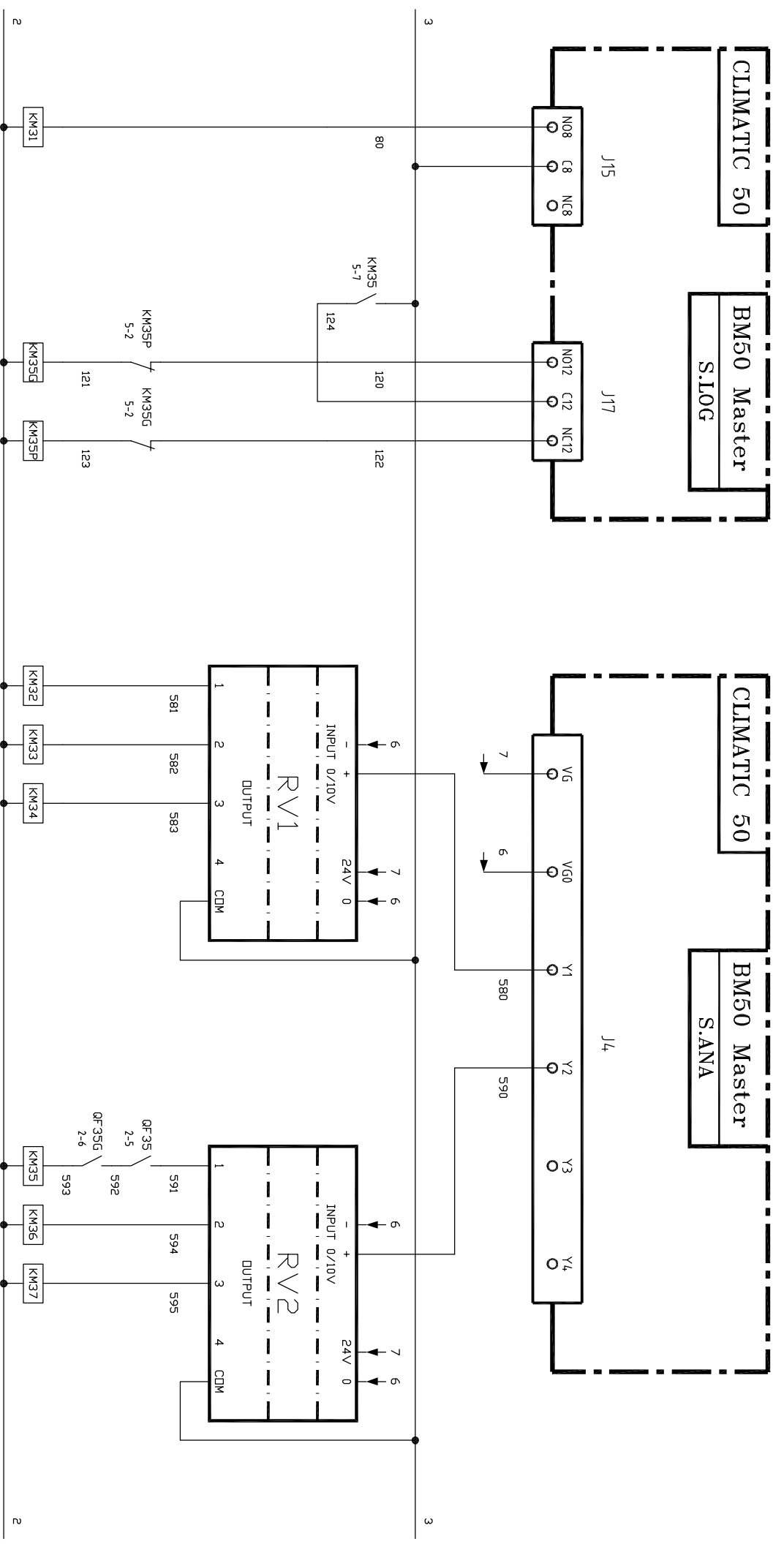
K1	NO	NF
1-1	9-9	
1-2	4-0	
6-1		

REGLAGES  
100%  
10s  
D

K2	NO	NF
1-3	9-9	
1-5	4-3	
6-2		

REGLAGES  
100%  
10s  
D

# SCHEMA ELECTRIQUE



KM31	NO	NF
2-1		
2-1		
2-1		

KM35G	NO	NF
2-6	5-2	
2-6		
2-6		

KM35P	NO	NF
2-7	5-2	
2-7		
2-7		

KM32	NO	NF
2-1		
2-2		
2-1		

KM33	NO	NF
2-2		
2-2		
2-2		

KM34	NO	NF
2-3		
2-3		
2-3		

KM35	NO	NF
2-5		
2-5		
2-5		

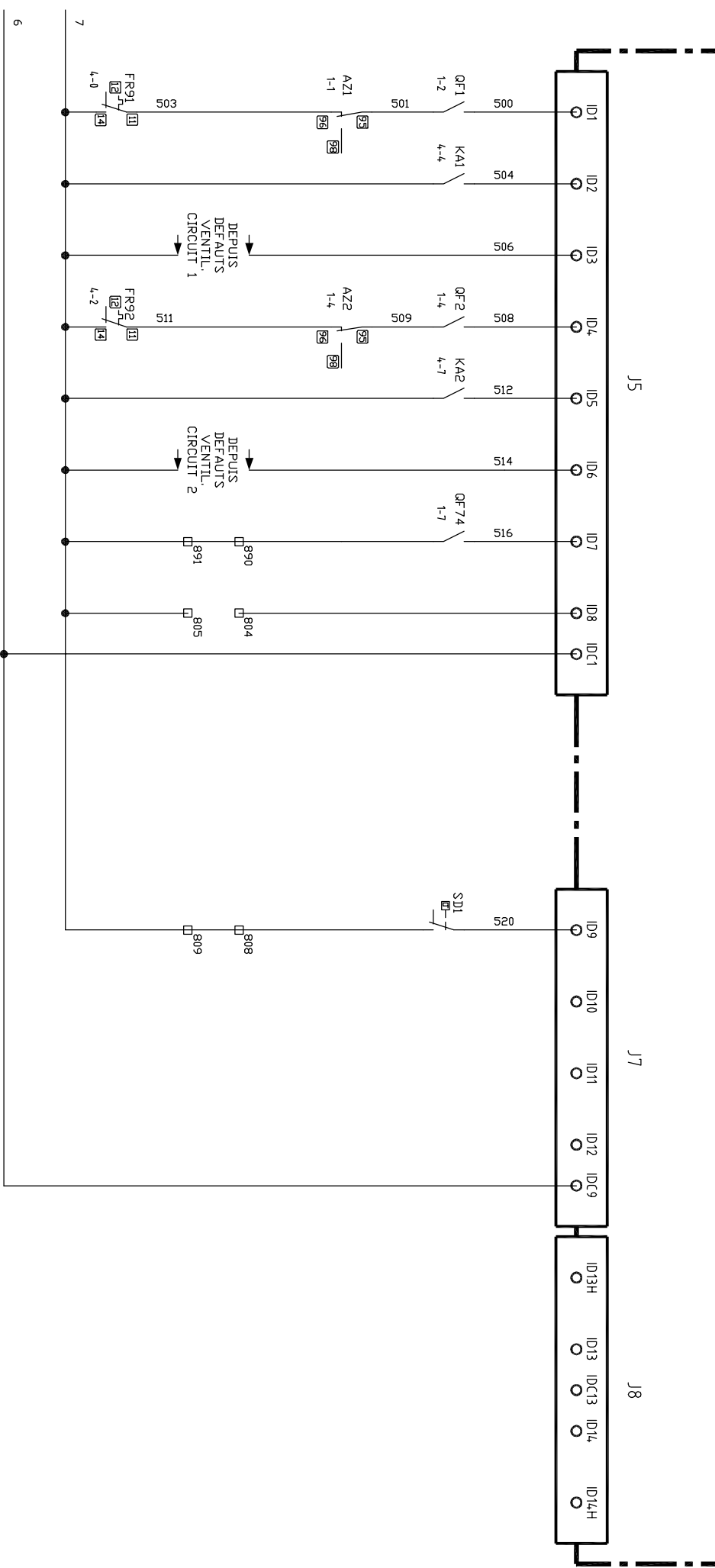
KM36	NO	NF
2-8		
2-8		
2-8		

KM37	NO	NF
2-8		
2-8		
2-8		

# SCHEMA ELECTRIQUE

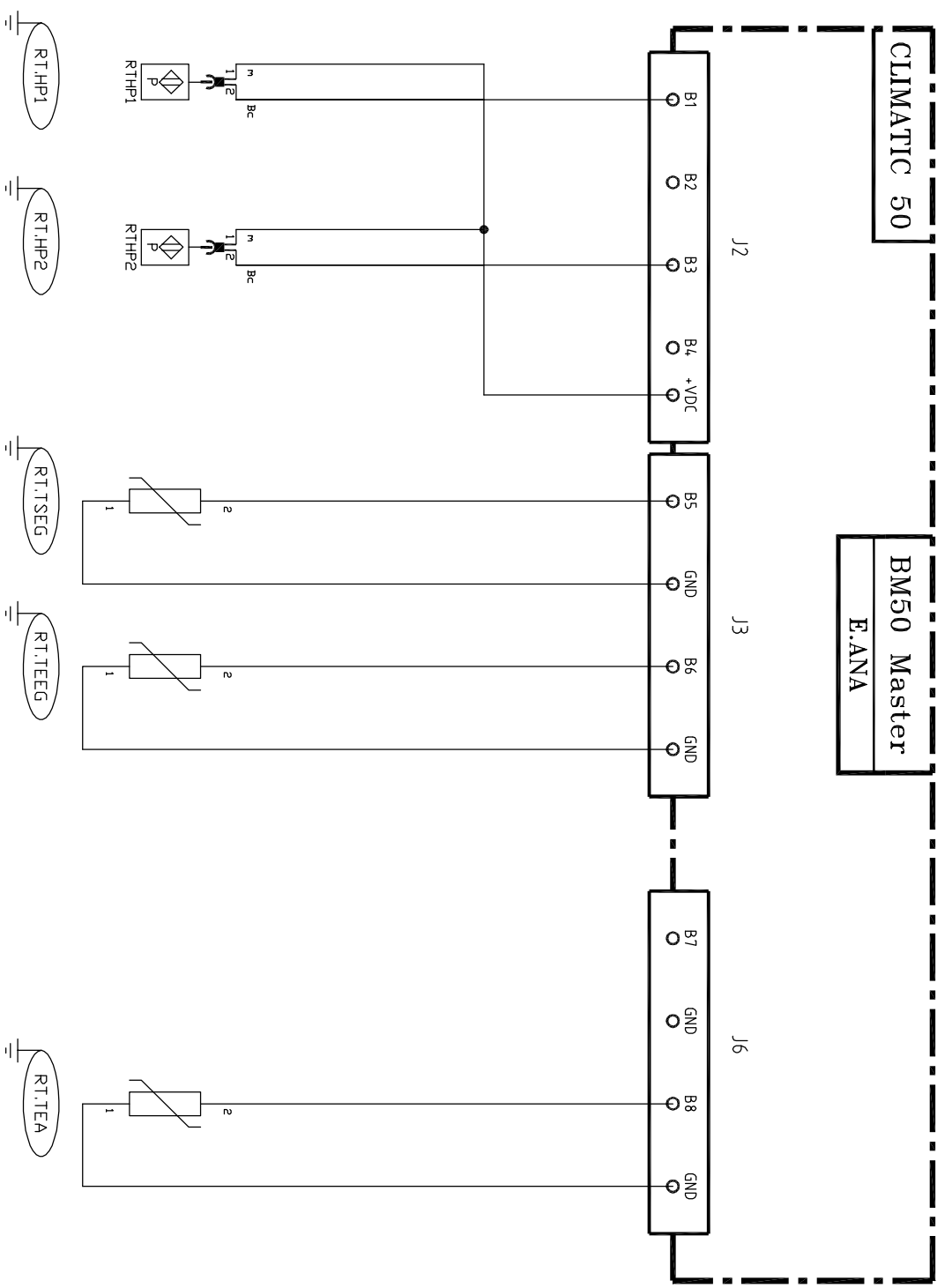
CLIMATIC 50

BM50 Master  
E.I.OG



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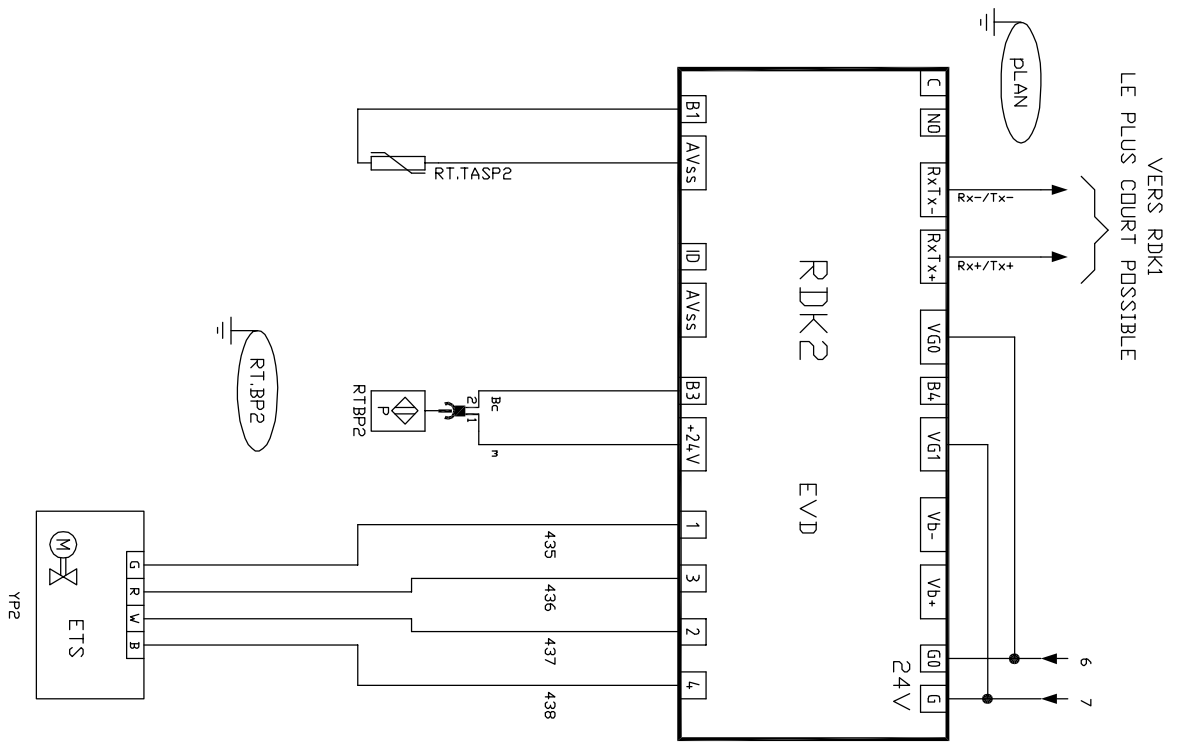
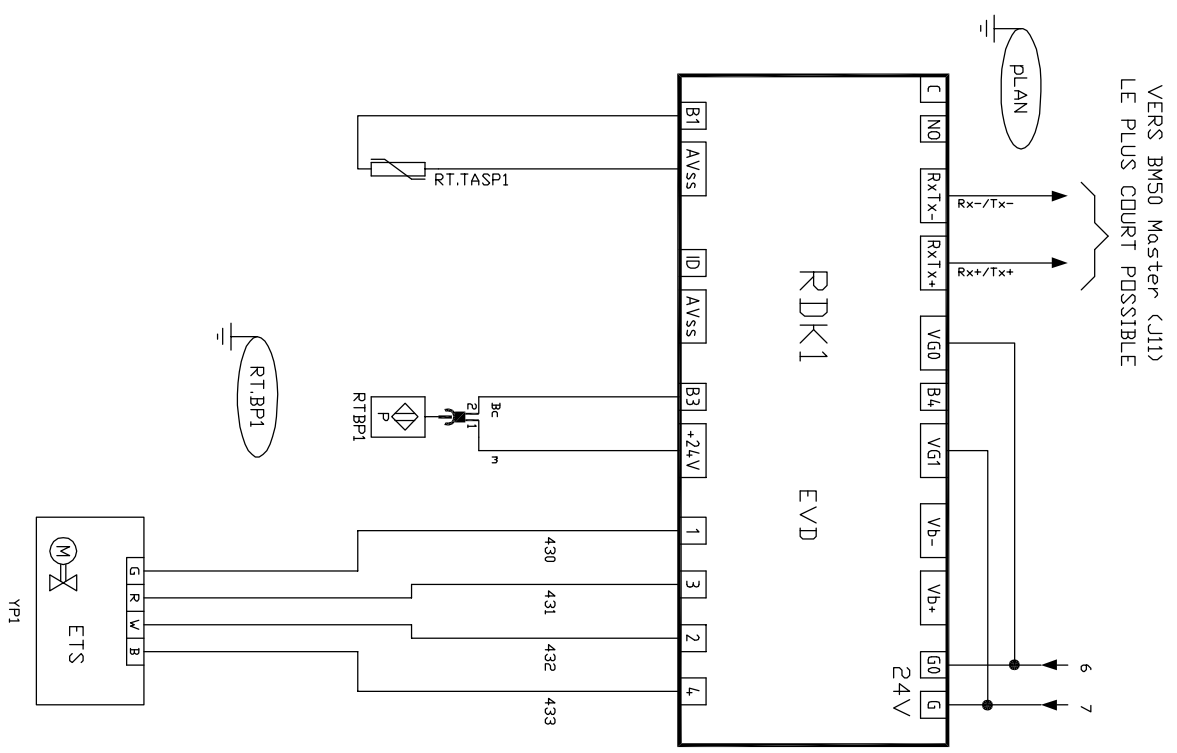
# SCHEMA ELECTRIQUE



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# SCHEMA ELECTRIQUE





# SCHEMA ELECTRIQUE

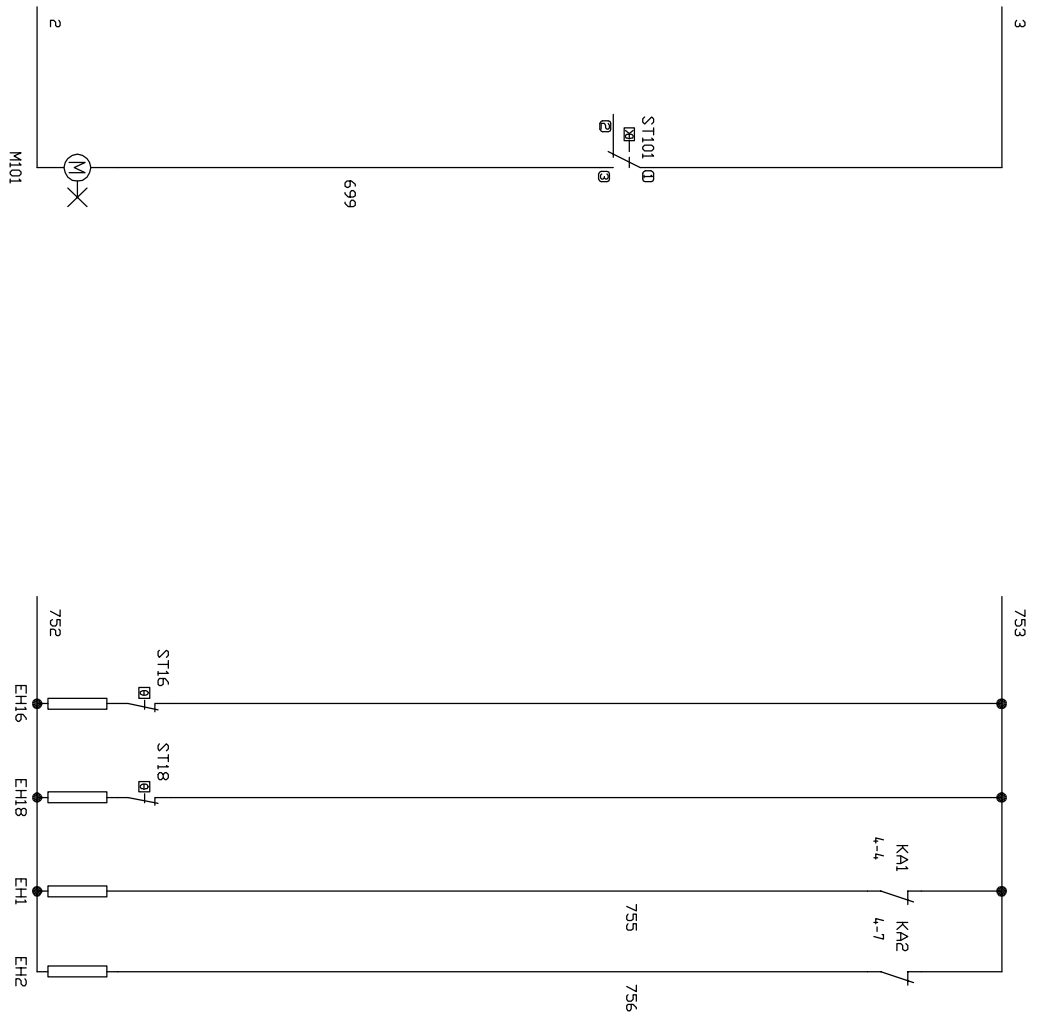
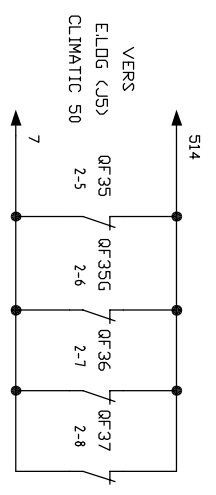
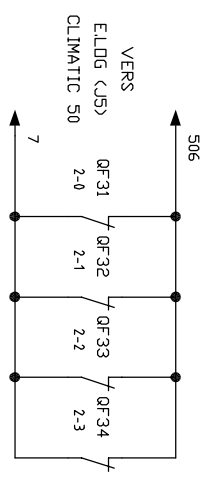
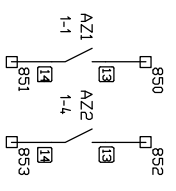
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# SCHEMA ELECTRIQUE

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NOM	
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ALIMENTATION  
GENERALE  
GENERAL  
SUPPLY

NEUTRAL	(OPTION) NEUTRE	N
PHASE 1	PHASE 1	L1
PHASE 2	PHASE 2	L2
PHASE 3	PHASE 3	L3
EARTH	TERRE	PE

FAULTS RESET NC=RESET	RESET DES DEFAUTS NF=RESET	804 805
CUSTOMER 'S WATER FLOW OF EVAPORATOR	DEBIT EVAPORATEUR CLIENT (CONTACT SEC)	808 809
REMOTE CONTACT FOR COMPRESSOR 1	REPORT CONTACT SEC DE MARCHE COMPRESSEUR 1	850 851
REMOTE CONTACT FOR COMPRESSOR 2	REPORT CONTACT SEC DE MARCHE COMPRESSEUR 2	852 853
REMOTE CONTACT NORMALLY OPEN REMOTE CONTACT NORMALLY CLOSED GENERAL FAILURE UNIT	REPORT CONTACT SEC N.O REPORT CONTACT SEC N.F DE DEFAUT GENERAL GROUPE	870 871 872
REMOTE ON/OFF FOR THE UNIT	MARCHE/ARRET A DISTANCE GROUPE (CONTACT SEC)	890 891

SCHEMA ELECTRIQUE

	0	1	2	3	4	5	6	7	8	9
A1->9	Horloge de degivrage Defrost timer			FU90 . . .	Fusible divers Various fuse			KA01	Relais auxiliaire d'alarme (sauf SULZER) Alarm auxiliary relay (except Sulzer)	
AP4	Carte de permutation Sequence switch card		FV . . .	Relais seuil tension Voltage level relay			KA02	Relais auxiliaire M/A à distance (24 V ou autre) Remote Start/Stop auxiliary relay (24V or else)		
C . . .	Condensateur Capacitor		HA . . .	Signalisation sonore Sound signal			KA1->9	Relais chaîne de securite compresseur ou circuit Compressor or circuit safety line relay		
D1 . . .	Relais anti-court cycle Anti-short cycle relay		HL01	Voyant défaut general General fault lamp			KA10->12	Relais Marche / Arrêt ON / OFF relay		
EH1->10	Resistance carter Crankcase heater		HL1->9	Voyant marche compresseur Compressor operating lamp			KA15	Relais pump down au demarrage Pump down relay		
EH11->15	Resistance bouteille Receiver heater		HL11->20	Voyant marche ventilateur Fan operating lamp			KA31->34	Relais marche forcee vanne liquide Solenoid liquid valve forced operation relay		
EH16->25	Resistance evaporaateur Evaporator heater		HL25->29	Voyant défaut pompe Pump fault lamp			KA40	Presence tension On line relay		
EH26->35	Resistance condenseur Condenser heater		HL30	Voyant sous tension Power On lamp			KA41->49	Relais renvoi défaut compresseur Remote compressor fault relay		
EH65->70	Resistance pompe Pump heater		HL31->39	Voyant arrêt contrôle Control thermostat stop lamp			KA50->75	Relais divers Various relay		
EH90->100	Resistance diverse Various heater		HL41->49	Voyant arrêt securite Safety stop lamp			KA76	Relais thermostat antigel Antifreeze thermostat relay		
EH101 . . .	Resistance armoire Electrical panel heater		HL51->60	Voyant défaut ventilateur Fan fault lamp			KA80	Relais contrôleur de debit Flow switch relay		
EL . . .	Eclairage Lighting		HL65->69	Voyant marche pompe Pump operation lamp			KA91->99	Relais protection interne compresseur Solid-state motor protection relay		
FA . . .	Relais seuil de courant Current limit relay		HL90 . . .	Voyant divers Various lamp			KM1->24	Contacteur compresseur Compressor contactor		
FR1->19	Relais thermique compresseur Compressor motor thermal overload contactor		K1->9	Inter temporise demarrage compresseur Compressor start timer			KM31->64	Contacteur ventilateur Fan contactor		
FR31->64	Relais thermique ventilateur Fan motor thermal overload contactor		K15->22	Inter temporise pump down au demarrage Pump down timer			KM65->85	Contacteur pompe Pump contactor		
FR65->70	Relais thermique pompe Pump motor thermal overload contactor		K31->34	Inter temporise passage ventilation GV / PV Fan HS / LS permutation timer			KM90 . . .	Contacteur divers Various contactor		
FR80->90	Relais thermique divers Various motor protector		K41->49	Inter temporise renvoi défaut compresseur Remote compressor fault timer			KT1->9	Relais temporise demarrage compresseur Compressor start time delayed relay		
FR91->99	Protection moteur compresseur Solid-state motor protector		K61->65	Inter temporise by-pass pressostat B.P. L.P. pressostat by-pass timer			KT11->14	Relais temporise decalage demarrages compresseurs Time delayed relay for compressor start gap		
FU1->50	Fusible moteur Motor fuse		K71->75	Inter temporise vanne by pass detendeur Expansion valve by-pass timer			KT15	Relais temporise arrêt groupe "type laiterie" Unit stop time delayed relay (dairy industry)		
FU60->69	Fusible contrôle Control fuse		K80	Inter temporise défaut debit Flow switch timer			KT21->24	Relais temporise coupure BP LP cut off time delayed relay		
FU70->78	Fusible protection transformateur Transformer protection fuse		K90 . . .	Inter temporise divers Various timers			KT37	Relais cliignoteur Cliignoteur relay		

## SCHEMA ELECTRIQUE

	0	1	2	3	4	5	6	7	8	9
KT41->49	Relais temporisé renvoi defaut Remote fault time delayed relay			QF70->89	Disjoncteur protection circuit commande Control circuit protection circuit breaker			SA11	Interrupteur local/distance Local/remote switch	
KT90 . . .	Relais temporisé divers Various time delayed relay		QF90 . . .	Disjoncteur divers Various circuit breaker			SA12->16	Interrupteur marche pompe Pump on/off switch		
M1->9	Compresseur Compressor motor		QS1->30	Porte fusible compresseur Compressor fuse breaker			SA17	Permutateur compresseur Compressor permutation switch		
M11->M15	Anti-court cycle Anti-short cycle		QS31->64	Porte fusible ventilateur Fan fuse breaker			SA18-19	Permutateur pompe Pump permutation switch		
M31->64	Ventilateur Fan motor		QS65->69	Porte fusible pompe Pump fuse breaker			SA20	Permutateur ete/hiver Summer/winter switch		
M65->70	Pompe Pump		QS90 . . .	Porte fusible divers Various fuse breaker			SA21	Permutateur M/A Klaxon Horn switch ON/OFF		
M90->100	Moteur divers Various motors		QSG	Interrupteur general Main power interrupter			SA90 . . .	Interrupteur divers Various switches		
M101-102	Ventilateur d'armoire Electrical panel fan			ouSectionneur general orMain power switch			SB1	Bouton poussoir hors tension Off line push button		
M111->109	Ventilateur de cuvette compresseur Compressor cylinder head fan			ouDisjoncteur general orMain power circuit breaker			SB2	Bouton poussoir sous tension On line push button		
UCHILLER	Regulateur Regulator		R . . .	Resistance triphasee 3 phase heater			SB3->6	Bouton poussoir marche Start push button		
	Module supplementaire (CP2) Extra regulator module (CP2)		RC . . .	Circuit RC RC circuit			SB7->9	Bouton poussoir arrêt Stop push button		
	Relais de commande ventilateur monophasé Command relay for single phase fan motor		RT . . .	Sonde ou capteur Temperature or pressure sensor			SB10	Bouton poussoir arrêt d'urgence Emergency stop push button		
AP31-32 (RV1-2)	Module de base (CP1) Basic module (CP1)		RTTEA	Temperature d'entree d'air Air inlet temperature			SB11	Bouton poussoir arrêt klaxon Horn stop push button		
P1 . . .	Afficheur D27 ouPC905 D27 or PC905 display		RTTEEG	Temperature d'entree d'eau glatee Cold water inlet temperature			SB12	Bouton poussoir test lampe Lamp test push button		
PA . . .	Ampèremètre Ammeter		RTTSEG	Temperature de sortie d'eau glatee Cold water outlet temperature			SB16->24	Bouton poussoir rearmement huile Oil pressostat reset push button		
PJ . . .	Wattmètre (compteur d'energie) Wattmeter		RTTREF . . .	Temperature de refroidement Discharge temperature			SB25->29	Bouton poussoir arrêt pompe Pump stop push button		
PT1->9	Compteur horaire Hour meter		RTTASP . . .	Temperature d'aspiration Suction temperature			SB41	Bouton poussoir effacement défaut Fault reset push button		
PV . . .	Voltmètre		RTTBP . . .	Temperature d'evaporation Evaporating temperature			SB65->69	Bouton poussoir marche pompe Start pump push button		
QF1->14	Disjoncteur compresseur Compressor circuit breaker		RV1 . . .	Variateur de vitesse Speed regulator			SB76->80	Bouton poussoir rearmement antigel Antifreeze reset push button		
QF31->64	Disjoncteur ventilateur Fan circuit breaker		SA1->5	Interrupteur sous tension On-off switch			SB90 . . .	Bouton poussoir divers Various push button		
QF65->69	Disjoncteur pompe Pump circuit breaker		SA6->10	Interrupteur marche circuit Circuit start switch			SD1 . . .	Contrôleur de débit Flow switch		

	0	1	2	3	4	5	6	7	8	9
SL1->5	Contrôleur de niveau d'eau Water level controller			ST36->40	Thermostat depart d'eau Water outlet thermostat			YV36->40	Electrovanne gaz chauds pressostatique Pressostatic hot gas solenoid valve	
SL16->20	Contrôleur de niveau d'huile Oil level controller			ST41->45	Thermostat retour d'eau Water inler thermostat			YV41->45	Electrovanne gaz chauds thermostatique Thermostatic hot gas solenoid valve	
SP1->9	Pressostat HP HP pressostat			ST46->55	Thermostat d'huile Oil thermostat			YV46->50	Electrovanne décharge bouteille Receiver by-pass valve	
SP1->15	Pressostat BP LP pressostat			ST56->64	Thermostat de surchauffe Overheat thermostat			YV51->55	Electrovanne aspiration Suction solenoid valve	
SP16->25	Pressostat d'huile Oil pressostat			ST71->75	Thermostat de degivrage Defrosting thermostat			YV56->60	Electrovanne by pass condenseur (ete/hiver) Condenser by-pass solenoid valve (winter/summer)	
SP26->30	Pressostat BP antigel Antifreeze pressostat			ST76->85	Thermostat antigel Antifreeze thermostat			YV61->70	Electrovanne inversion cycle Reverse cycle solenoid valve	
SP31->50	Pressostat HP de commande ventilateur Fan control HP pressostat			ST90->100	Thermostat divers Various thermostat			YV71->75	Electrovanne by pass détendeur Expansion valve by-pass solenoid valve	
SP51->55	Pressostat HP de commande resistance bouteille Receiver heater control pressostat			ST101...	Thermostat resistance et ventilateur d'airnoire Electrical panel fan and heater control thermostat			YV90...	Electrovanne diverse Various solenoid valve	
SP56->60	Pressostat HP de commande vanne decharge bouteille Discharge valve control pressostat			T1...	Transformateur CLIMATIC CLIMATIC transformer					
SP61->65	Pressostat HP de commande delestage Overload control pressostat			TA...	Transformateur d'intensite Current transformer					
SP66->70	Pressostat HP de commande degivrage Defrosting pressostat			TC1...	Transformateur Transformer					
SP71->75	Pressostat de commande by-pass détendeur Expansion valve by-pass control pressostat			V...	Diode Diode					
SP90->110	Pressostat divers Various pressostat			V0PT...	Optocoupleur Optoelectronic coupler					
SP111->115	Pressostat HP/BP combine HP/LP pressostat			XB...	Barette sectionnable Isolator link					
SQ1...	Contact de porte Door contact			XS90...	Prise de courant Plug					
SR91...	Contrôleur de phase Phase controller			YP1...	Détendeur électronique Electronic expansion valve					
ST1->5	Thermostat de contrôle Control thermostat			YV1->5	Electrovanne liquide Liquid solenoid valve					
ST11->15	Thermostat de commande resistance bouteille Receiver heater control thermostat			YV6->15	Electrovanne reduction de puissance compresseur Compressor capacity control valve					
ST16->25	Thermostat de commande resistance evapourateur Evaporator heater control thermostat			YV16->20	Electrovanne injection de liquide Liquid injection solenoid valve					
ST26->30	Thermostat de commande resistance condenseur Condenser heater control thermostat			YV21->25	Electrovanne economiseur Economizer solenoid valve					
ST31->35	Thermostat de commande ventilateur Fan control thermostat			YV26->35	Electrovanne by-pass compresseur Compressor by-pass solenoid valve					

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SCHEMA ELECTRIQUE