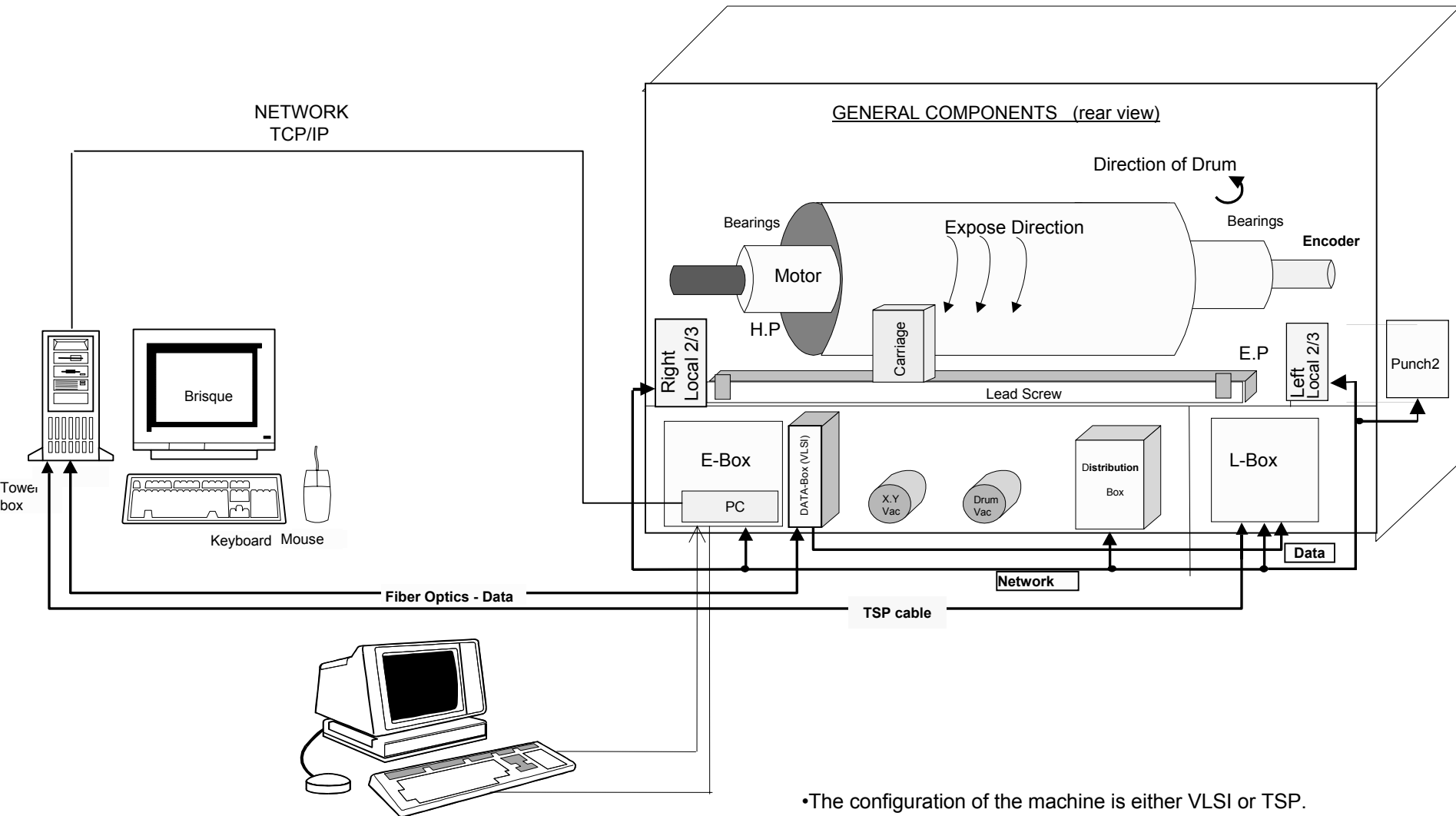


Electronics

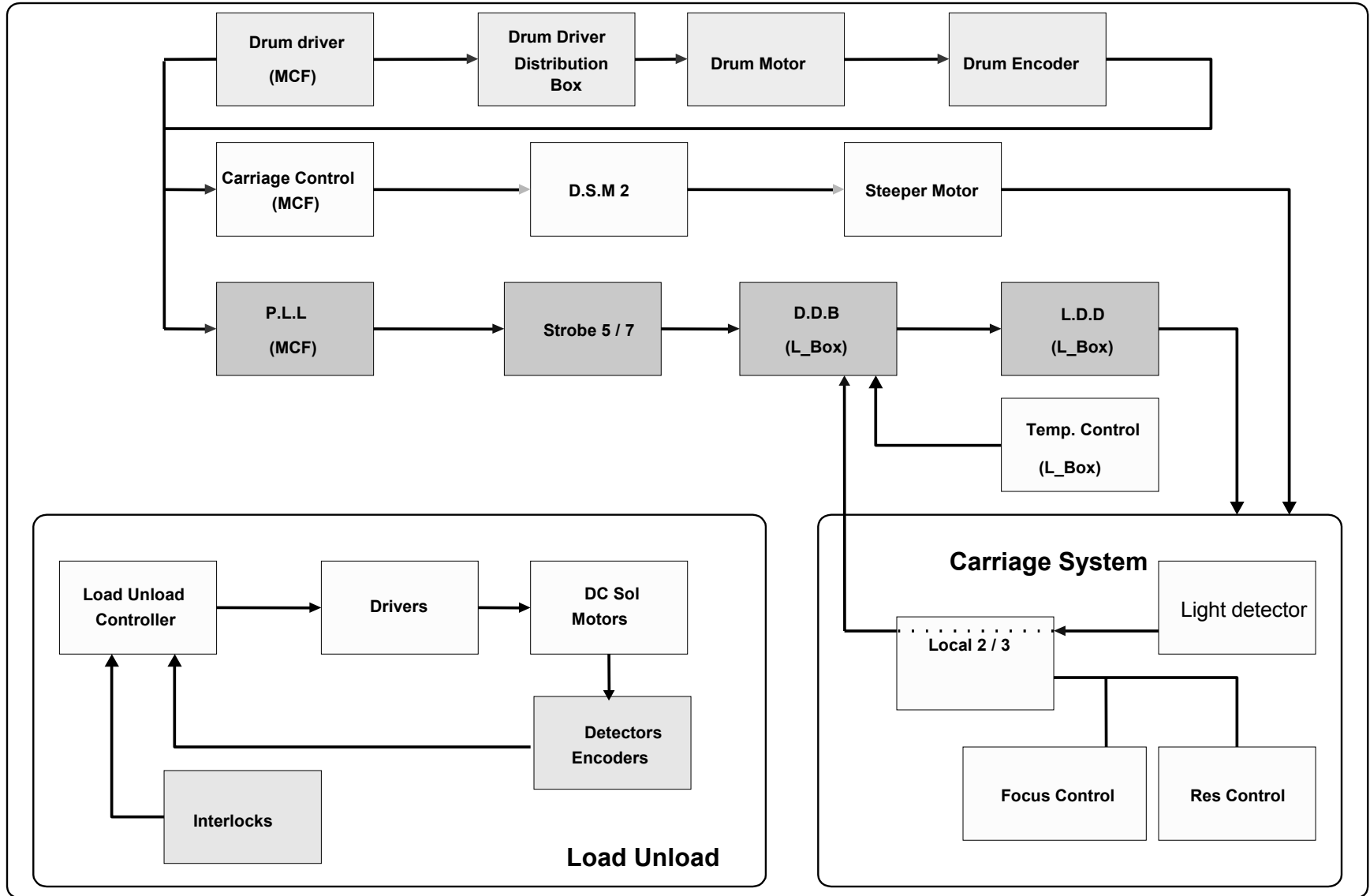
Chapter 1

Lotem Component Positions

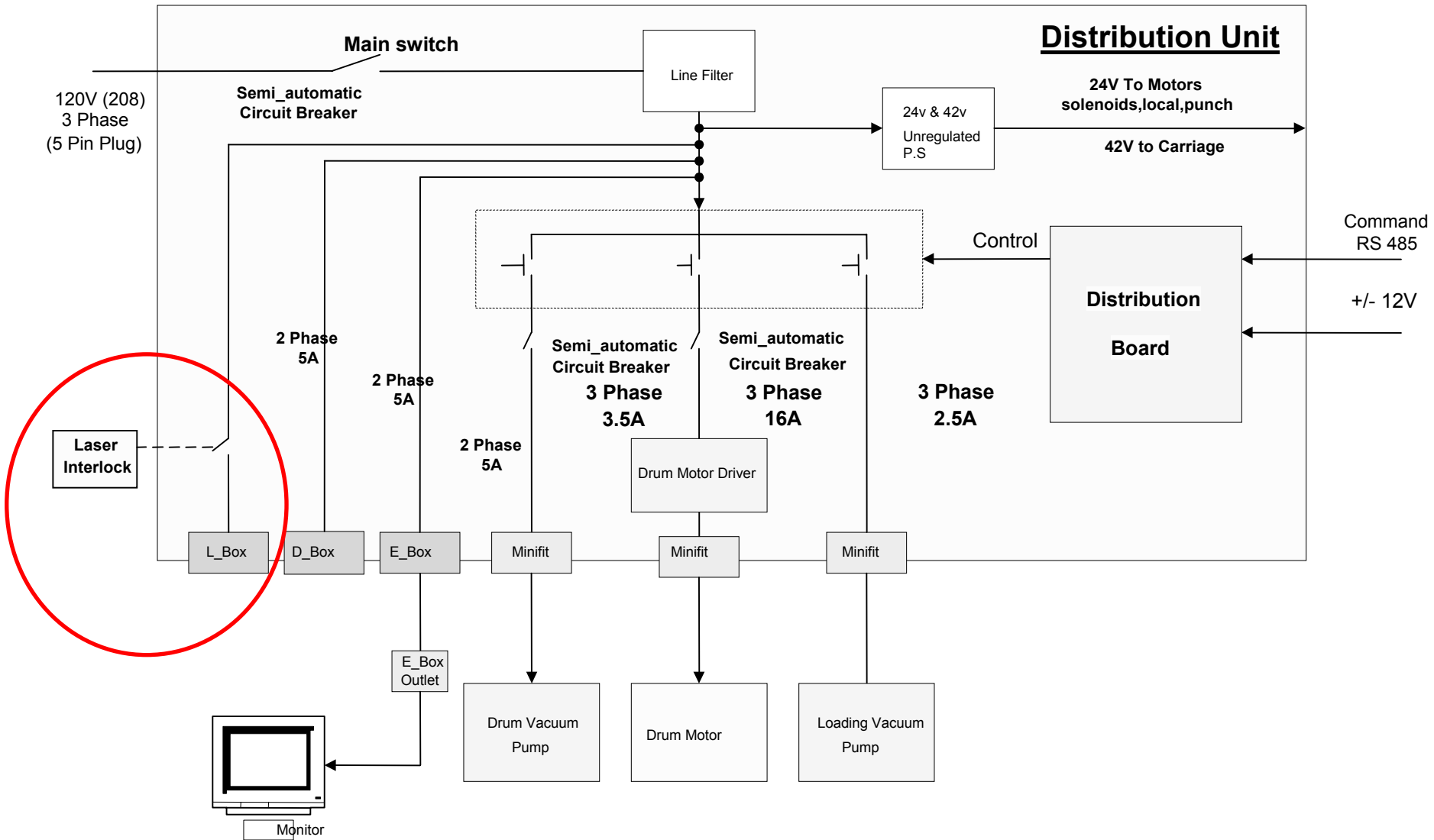


- The configuration of the machine is either VLSI or TSP.
- In Local 3 machine the punch's been operated from the local board ,and the punch unit is removed.

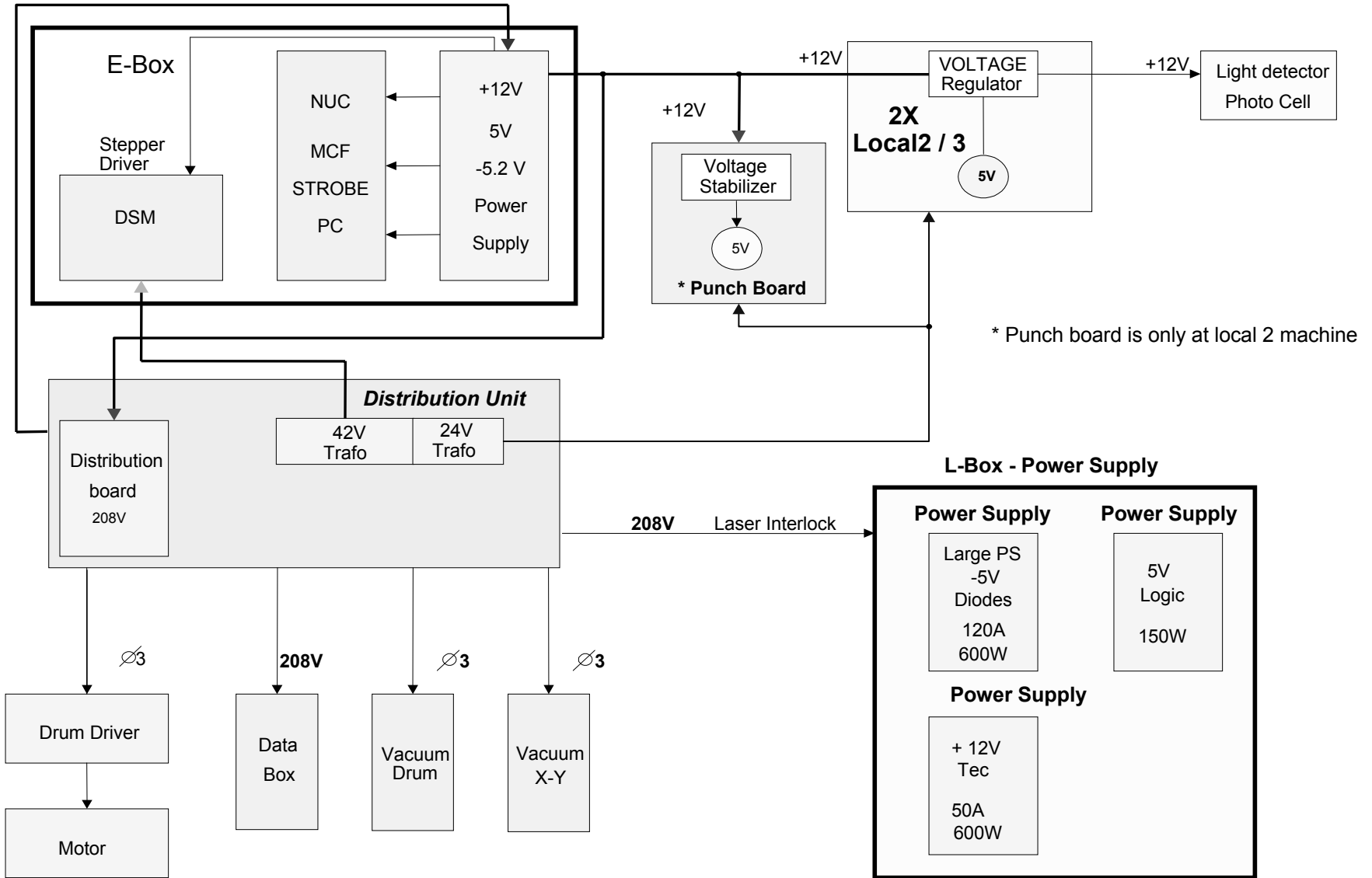
Main System Flow



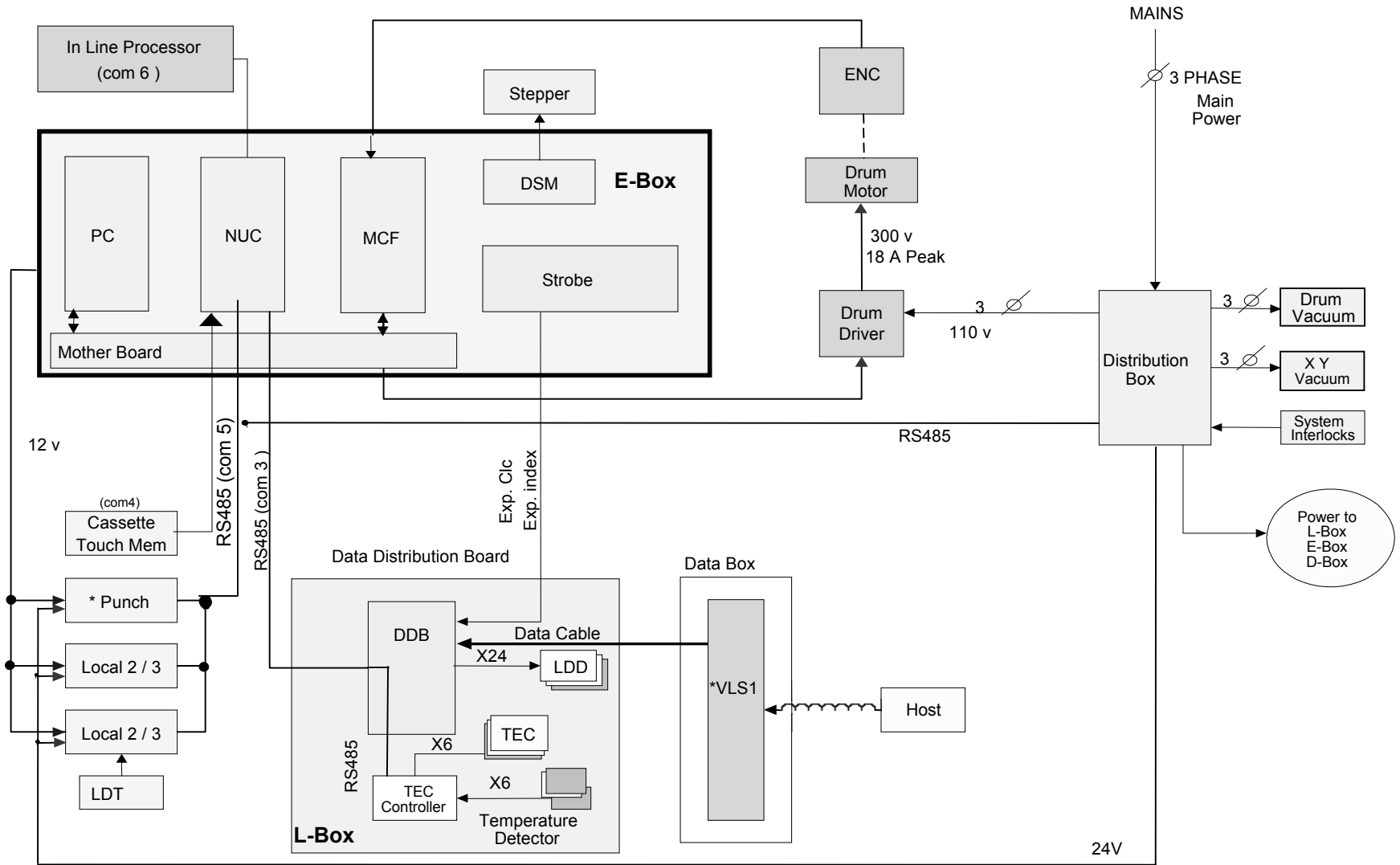
Power Distribution



Power Supply from the Distribution Box



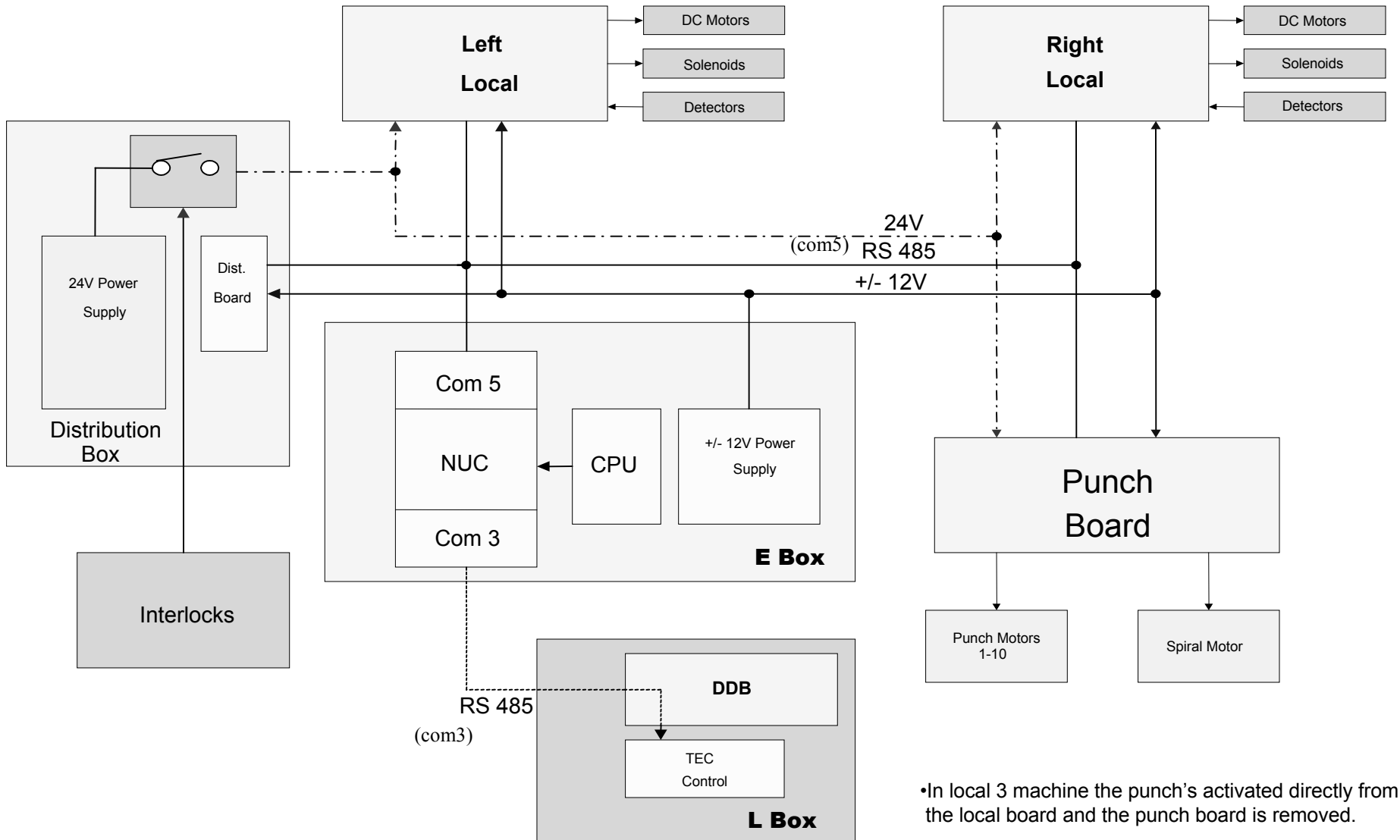
Communication



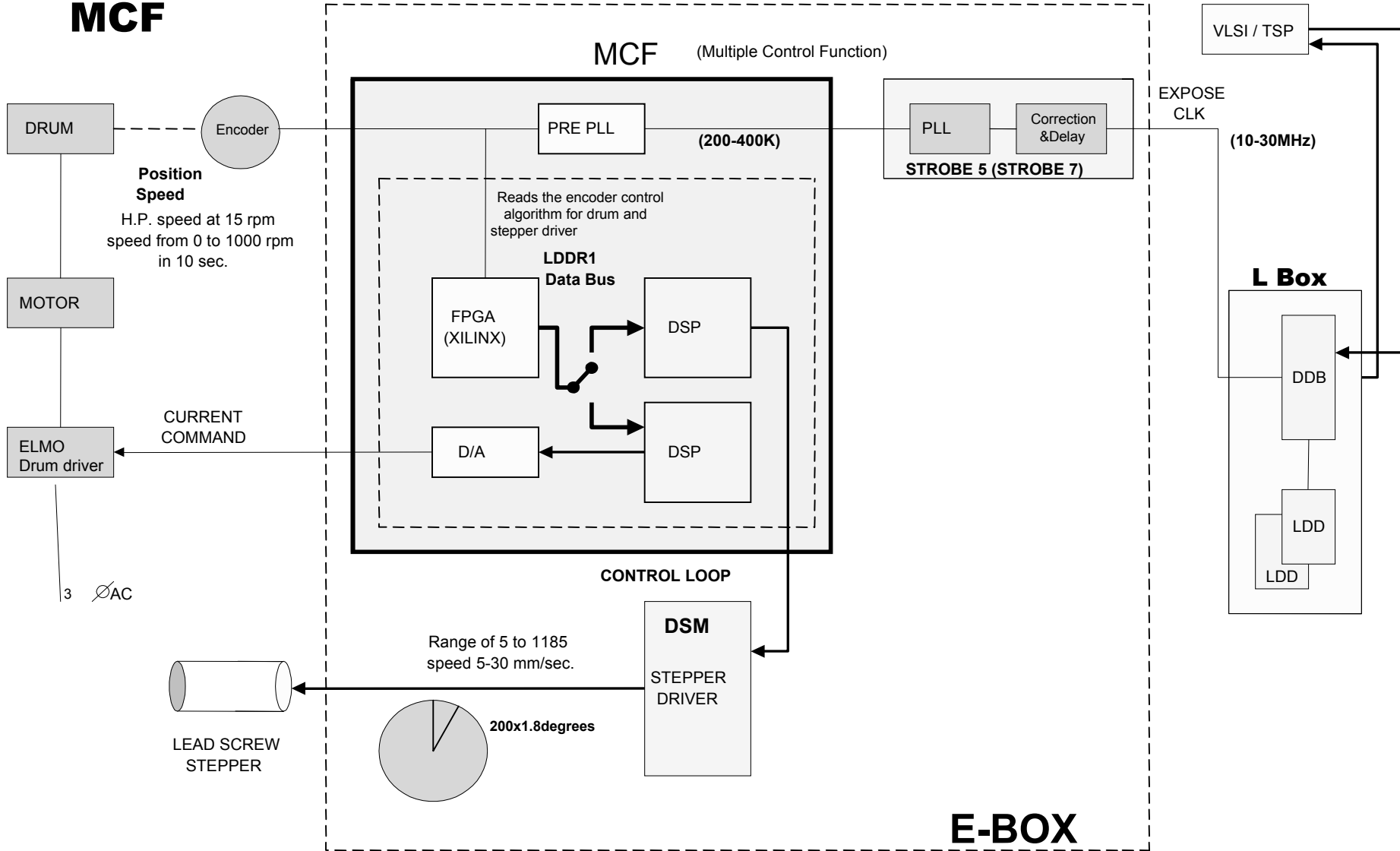
* Punch board only in local 2 machine

** VLSI only in old machine

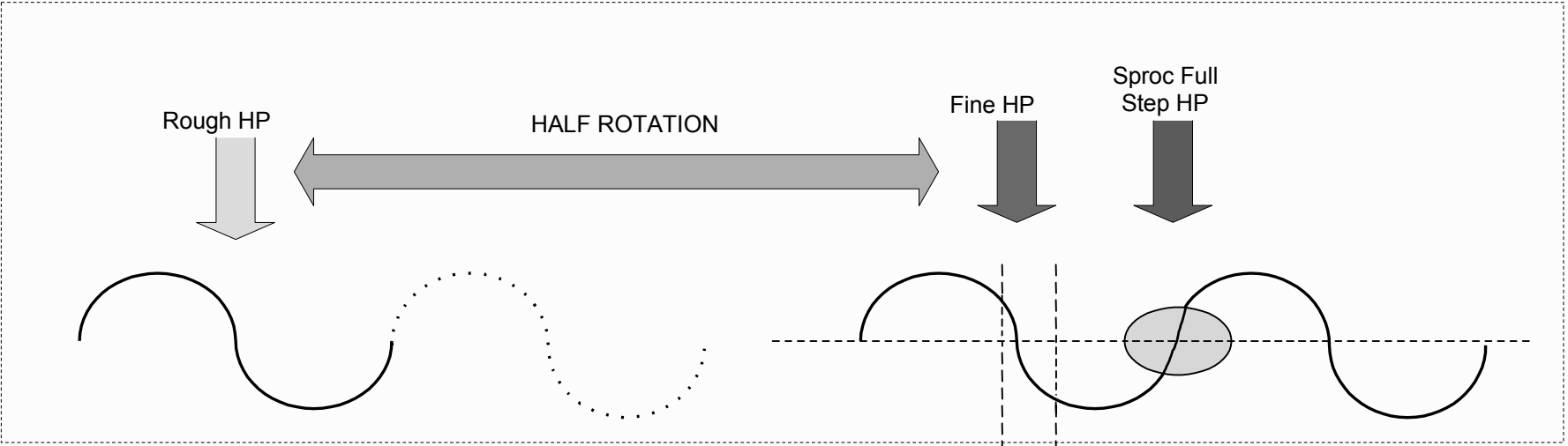
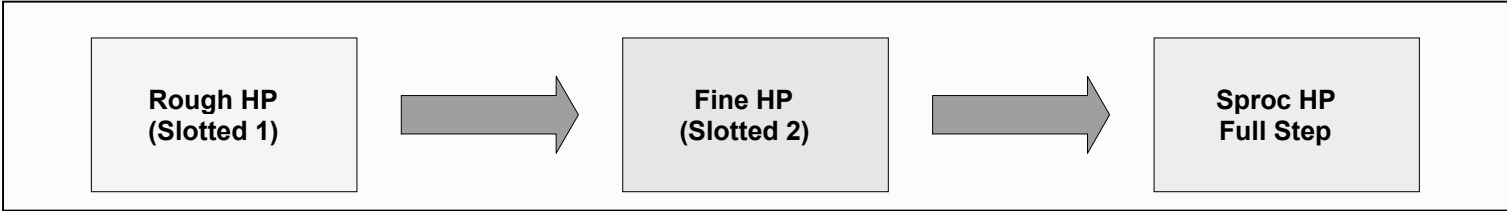
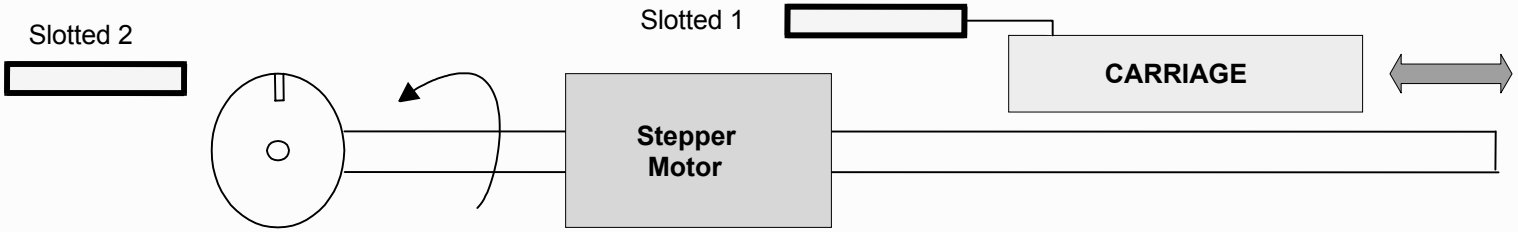
Local / Punch Power & Communication



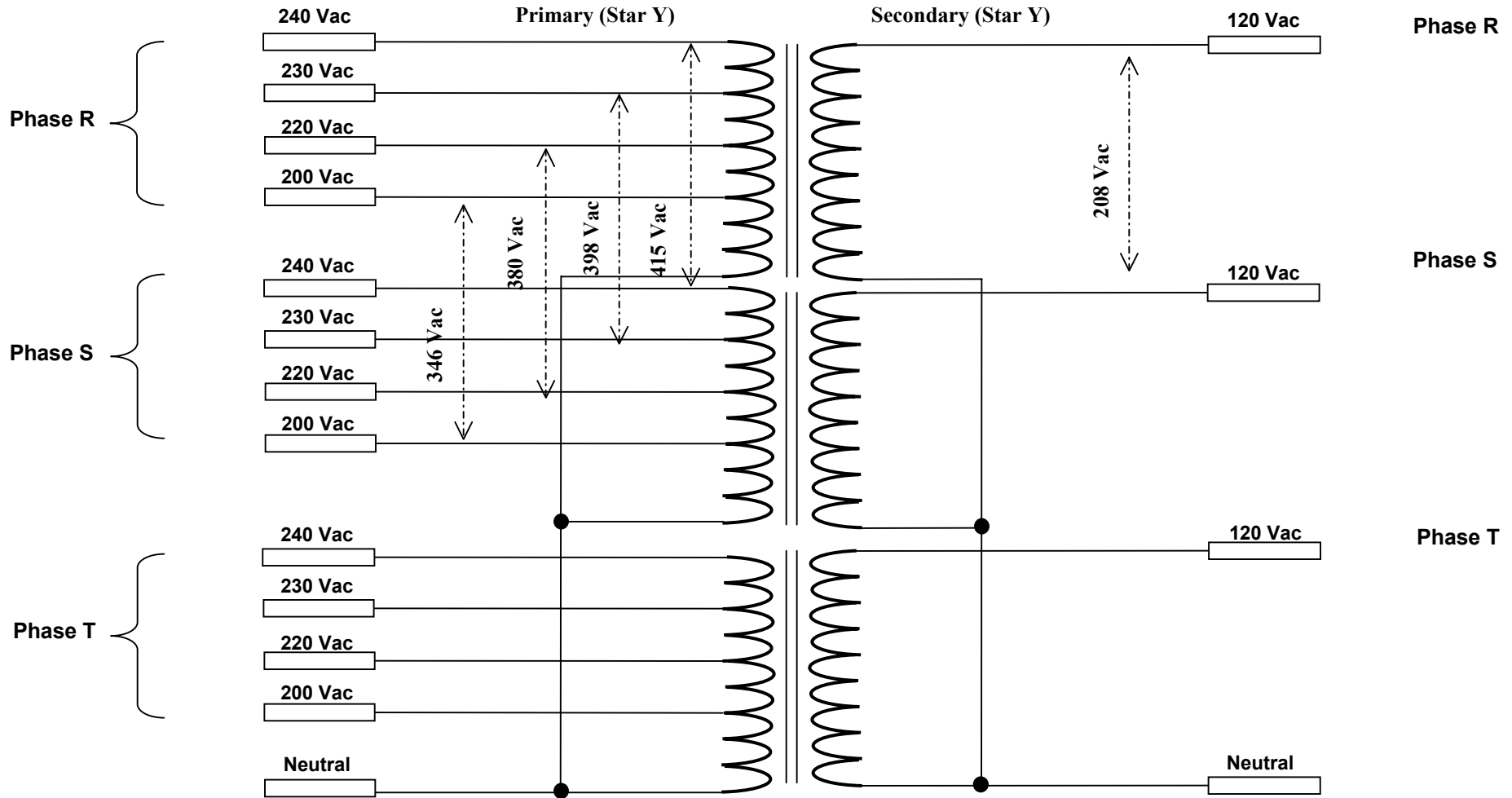
MCF



Home Position



Main Transformer

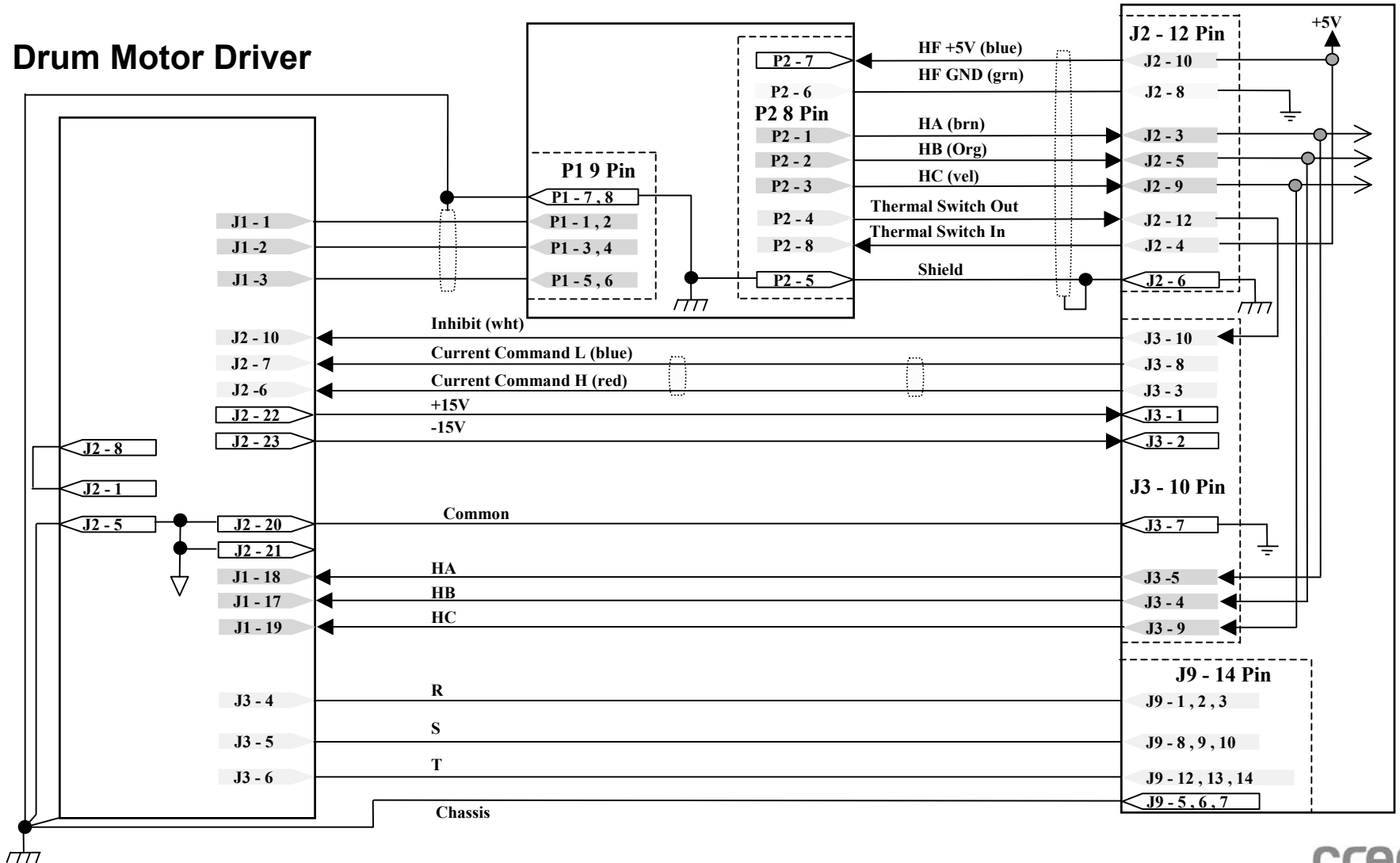


Drum Motor Driver

Drum Motor

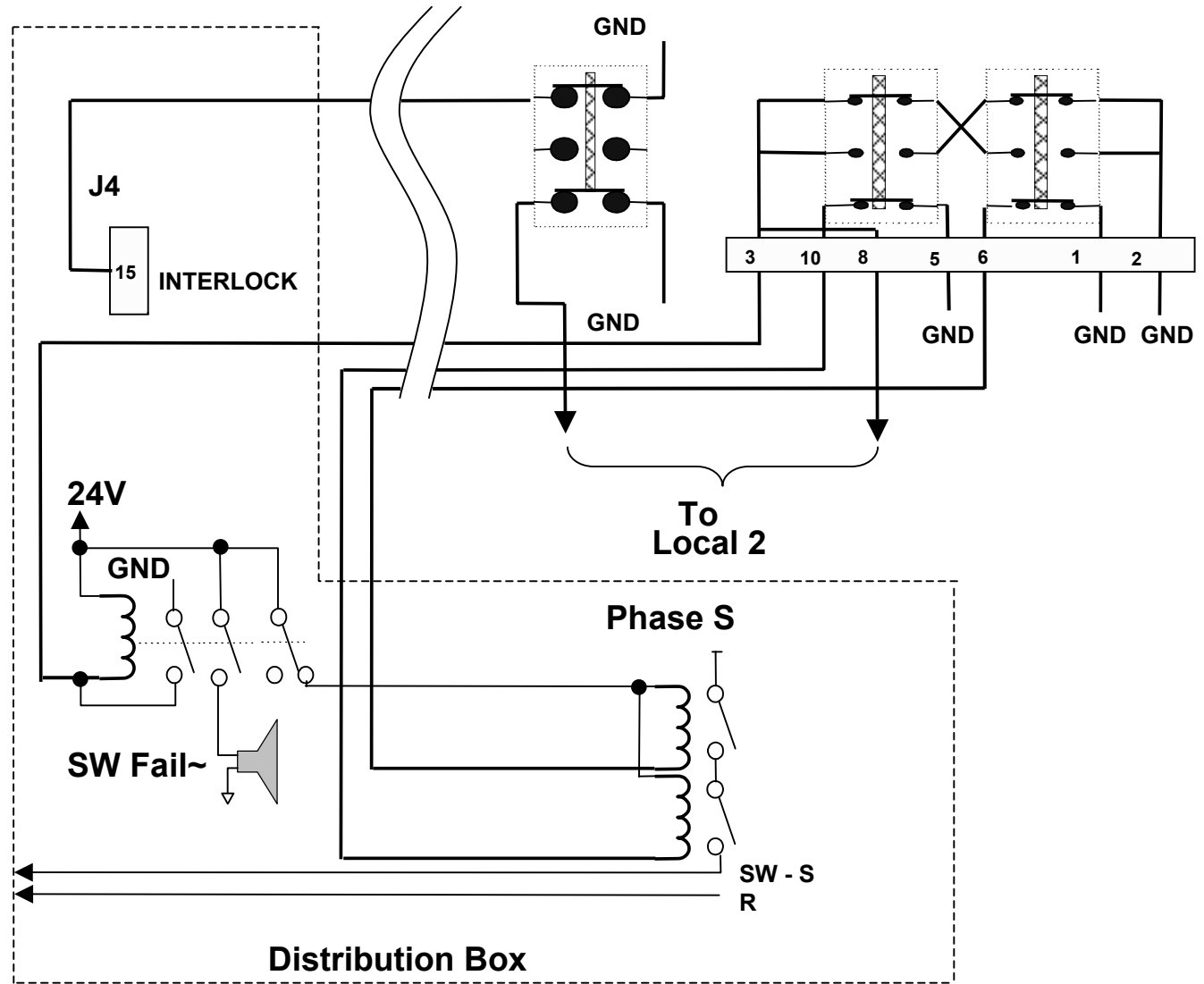
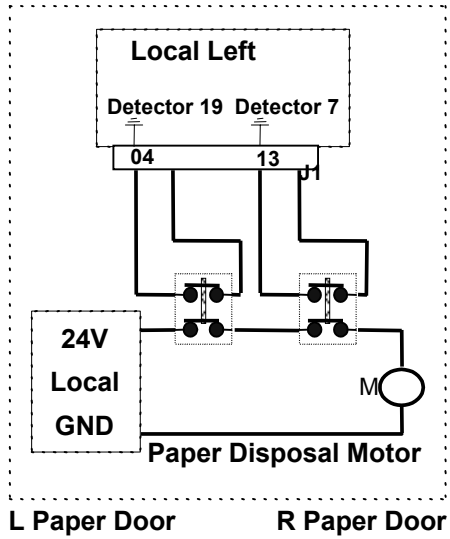
Distribution

Drum Motor Driver



Interlocks

Paper Interlock



Drum Driver (LED Diagnostics)

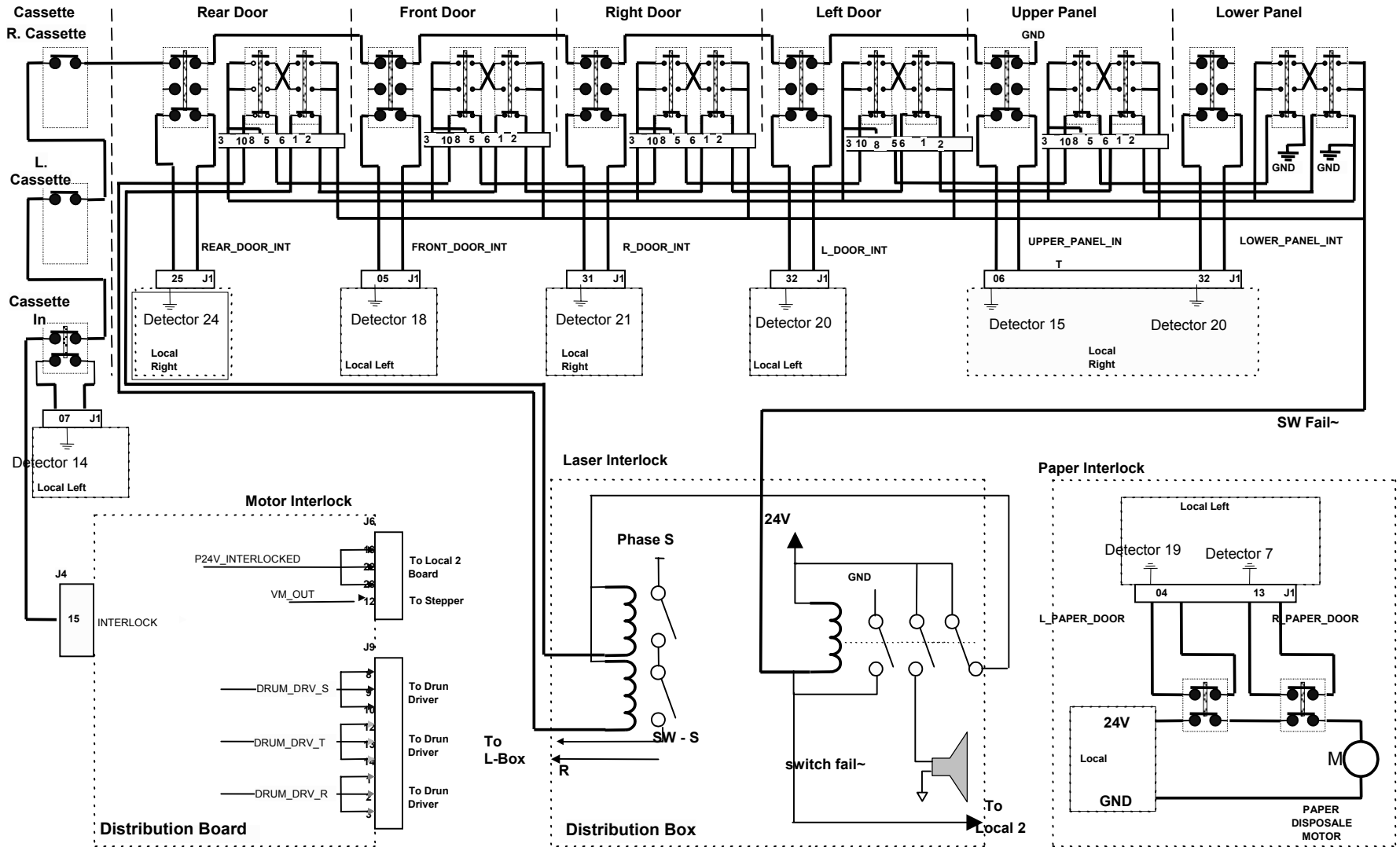
Five LED's are installed on the upper board of the amplifier with the following designation: Ic,Sh,In,Pr,Vs. Under normal operation only Vs should illuminate (option 9).

The following table represents all the combination possibilities of the LED's

Name	LED	1	2	3	4	5	6	7	8	9
IC (Red)	L 5				X	X			X	
She (Red)	L 4			X			X		X	
In (Red)	L 3	X	X	X		X	X	X	X	
Pr (Red)	L 2		X				X		X	
Vs (Yellow)	L 1	X	X	X	X	X	X		x	X

- 1.External inhibits
- 2.Under / over voltage protection
- 3.Short protection
- 4.Continuous current limit
- 5.Insufficient load inductance or loss of tach encoder feedback
- 6.Excess temperature.
- 7.Internal power supply is loaded
- 8.Loss of commutation feed back
- 9.Normal operation

Lotem Interlocks



Motor Interlocks

(Grey wire)

Distr. J4-7 gnd → add.L2-4 → Safety Switch → Front Door → 9 →

Left door → left cassette → right cassette → Cassette

→ add.L2-13 → upper panel → Rear door → add.R2-13

→ RIGHT DOOR → add.R2-4 → Distr. J4-15

+addition of Loading area safety switch

Laser Interlock

(Brown & white brown wires)

Distr.(18pin) –1 → (blk) LOWER PANEL –1 → 6
→ (brn) REAR DOOR –1 → 6 → UPPER PANEL –1 → 6 → add.L2-1
→ LEFT DOOR –1 → 6 → FRONT DOOR –1 → 6 → add.L2-10
→ add.R2-1 → RIGHT DOOR –1 → 6 → add.R2-10 → Distr.(18pin) – 10

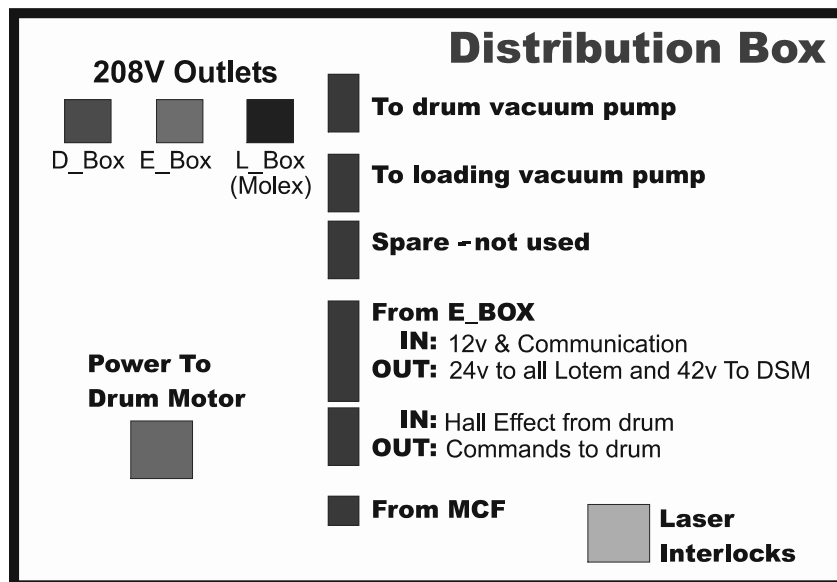
Distr.(18pin) –7 → (blk) LOWER PANEL –5 → 10
→ (w/brn) REAR DOOR –5 → 10 → UPPER PANEL –5 → 10
→ add.L2-9 → LEFT DOOR –5 → 10 → FRONT DOOR –5 → 10
→ add.L2-18 → add.R2-9 → RIGHT DOOR –5 → 10 → add.R2-18
→ Distr.(18pin) – 16

Electronics 3

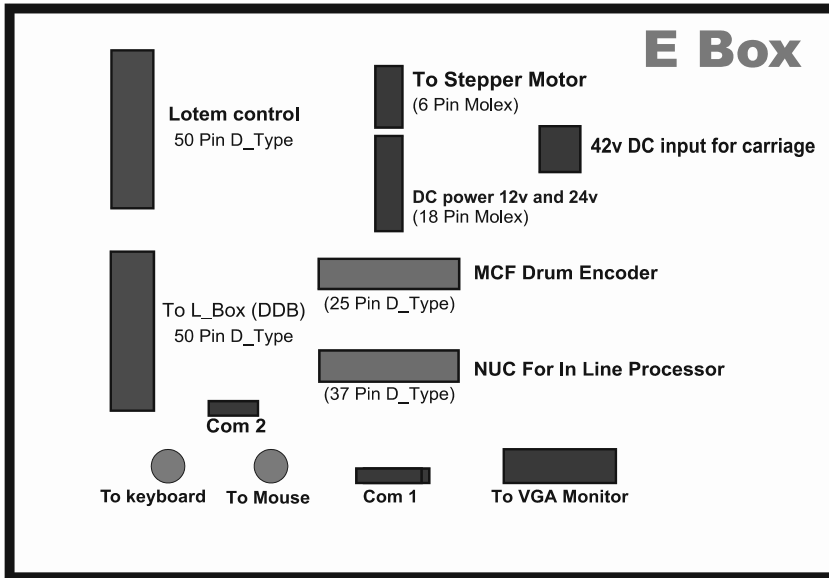
Plugs, Connectors, Fuses

creo™

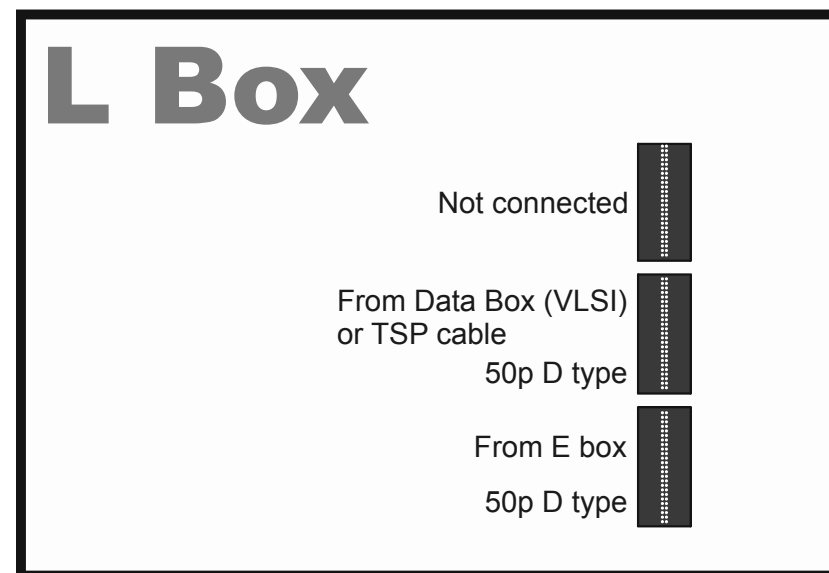
Plug Configurations



Plug Configurations



Plug Configurations



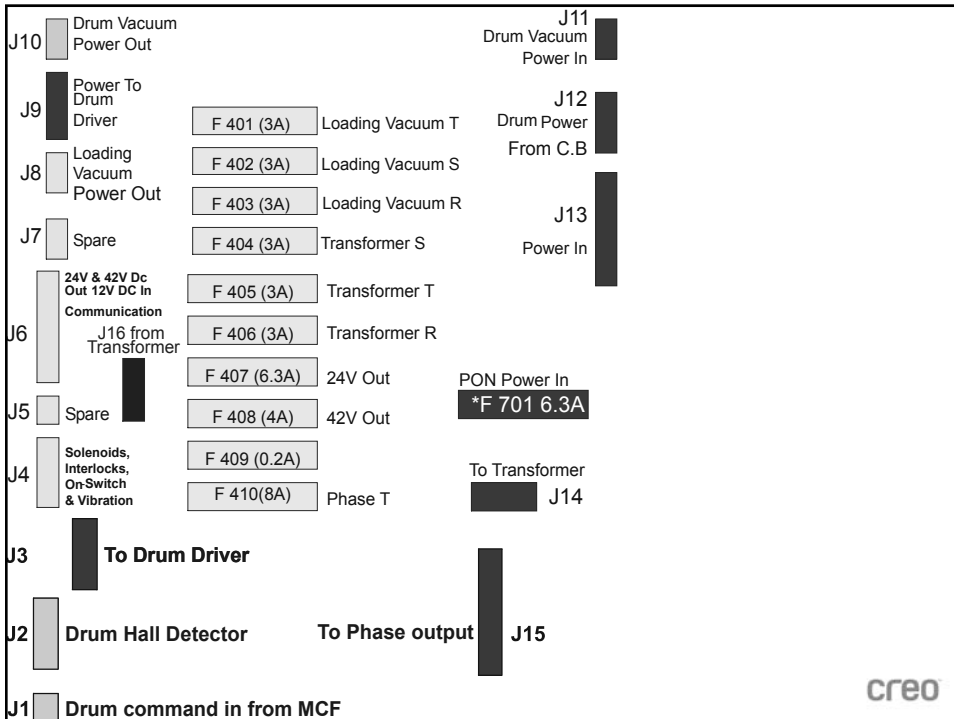
Plug Configurations

VLSI - Data Box

To L Box DDB
50 pin D type

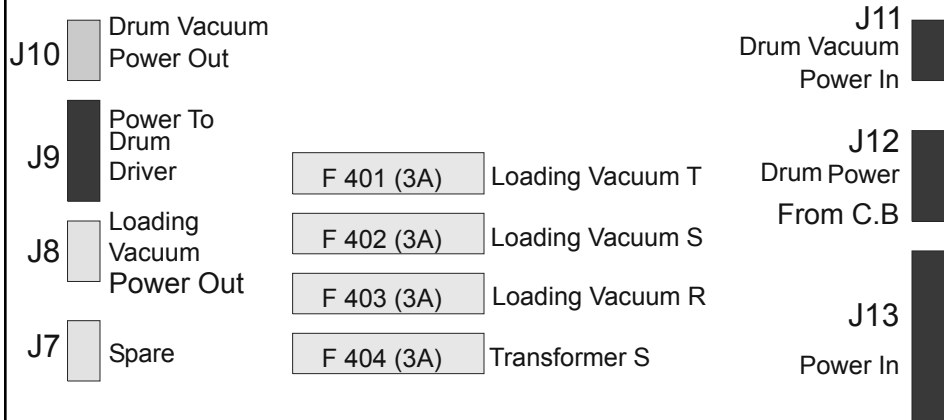


To Brisque
Fiber cables



Plug Configurations

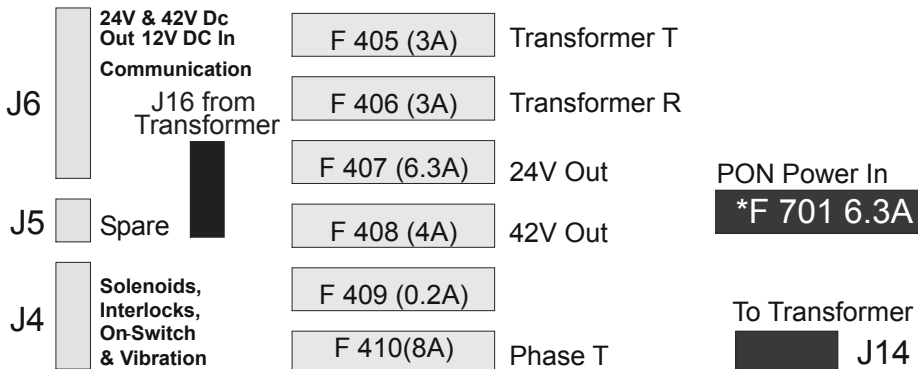
Distribution Box Top



creo

Plug Configurations

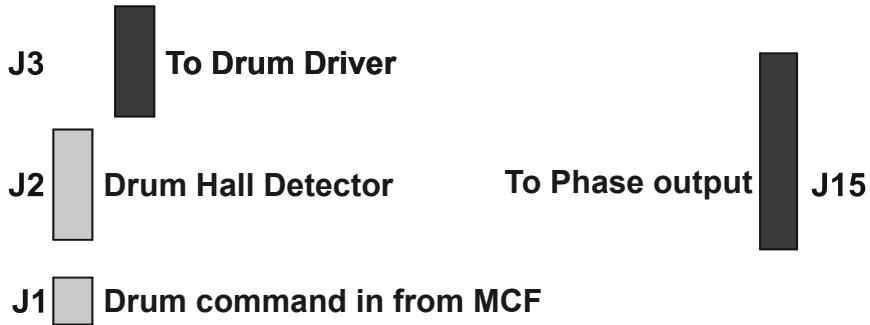
Distribution Box Middle



creo

Plug Configurations

Distribution Box Bottom



creo

Distribution Board

Fuses

1	F401 (3A)	Phase T for Loading vacuum pump
2	F402 (3A)	Phase S for Loading vacuum pump
3	F403 (3A)	Phase R for Loading vacuum pump
4	F404 (3A)	Phase S Input transformer for 24V
5	F405 (3A)	Phase R Input transformer for 24V
6	F406 (3A)	Phase T Input transformer for 24V
7	F407 (6.3A)	24V DC after transformer
8	F408 (4A)	42V DC after transformer
9	F409 (200MA)	After small transformer (DC) on the distribution board
10	F410	Not in used
11	F701 (6.3A)*	Before small transformer (AC) on the distribution board

* F 701 new distribution board = 200mA

creo

Distribution Board connectors

Power Distribution board connectors

RA = Right angle Molex to box panel

(Others = 90° Molex inside box)

J1 - Drum command from e-box (molex 4p).

(RA)

3	SH	4	ST2
1	COMMAND IN	2	COMMAND RET

J2 – Drum Hall Detector ECT (MOLEX 12P)

(RA)

7	8	9	10	11	12
	GND	HC	VCC		TEMP SENSE
		HA	VCC	HB	SH
1	2	3	4	5	6

creo

Distribution Board connectors

J3 - To Drum Driver (Molex 10P).

6	7	8	9	10
SH	GND	COMMAND OUT RET	HC	Inhibit
+15V	-15V	COMMAND OUT	HB	HA
1	2	3	4	5

J4 - Interlock and Solenoids (Molex 16p).

(RA)

9	10	11	12	13	14	15	16
FRONT DOOR	REAR DOOR	CASSET VALVE	ON_OFF	ON_OFF RET.	VIBRO Detector	INTLOCK	FLYOFF
FRONT RET.	REAR RET.	CASSET RET.		ST1	VIBRO RET.	INTLOCK RET.	
1	2	3	4	5	6	7	8

creo

Distribution Board connectors

J5 – Spare Solenoid (Molex 2 Pin) .
(RA)

2	SOL4 POWER
1	24V RET

J6 - Power & Command (Molex 24 pin).
(RA)

13	14	15	16	17	18	19	20	21	22	23	24
24V SWITCH	24V RET	PI2V	GND	RXD	RXD-	SH	SPARE	24V RET	24V SWITCH	24V SWITCH	42V RET
24V	24V RET	PI2V	GND	TXD	TXD-	RESET-	LOW SPEED	24V RET	24V	24V	42V
1	2	3	4	5	6	7	8	9	10	11	12

J7 - Spare Phase (Molex 6 pin).
(RA)

4	5	6
T		SH
	N	
1	2	3

creo

J8 - Loading vaccum pump power out (Molex 8p).
(RA)

5	6	7	8
R		T	
	S		SH
1	2	3	4

J9 – Power to Drum Driver (Molex 14p) .

8	9	10	11	12	13	14
S	S	S		T	T	T
R	R	R		SH	SH	SH
1	2	3	4	5	6	7

J10 – Drum vaccum pump power out (Molex 8p).
(RA)

5	6	7	8
	S		SH
R		T	
1	2	3	4

creo

J11 – Drum Vacuum Pump Power in (Molex 8p) .

5	6	7	8
	S		SH
R		T	
1	2	3	4

J12 - Drum Vacuum Power in (to Board) (Molex 14p) .

8	9	10	11	12	13	14
S	S	S		T	T	T
R	R	R		SH	SH	SH
1	2	3	4	5	6	7

J13 - Power in (Molex 24p) .

13	14	15	16	17	18	19	20	21	22	23	24
S	S	S	S		T	T	T	T		SH	SH
R	R	R	R		N	N	N	N		SH	SH
1	2	3	4	5	6	7	8	9	10	11	12

creo

J14 - To Trafo (Molex 10p) .

6	7	8	9	10
	SH		S	
N		T		R
1	2	3	4	5

J15 - E-box and L-box and Spare Outlet (Molex 20p) .

11	12	13	14	15	16	17	18	19	20
SH	SH	SH	SH		T	T		R	R
N	N	N	N	N	N		S	S	
1	2	3	4	5	6	7	8	9	10

J16 - From Trafo (Molex 16p) .

7	8	9	10	11	12
24V	24V	24V RET	24V RET	42V RET	42V
24V	24V	24V RET	24V RET	42V RET	42V
1	2	3	4	5	6

creo