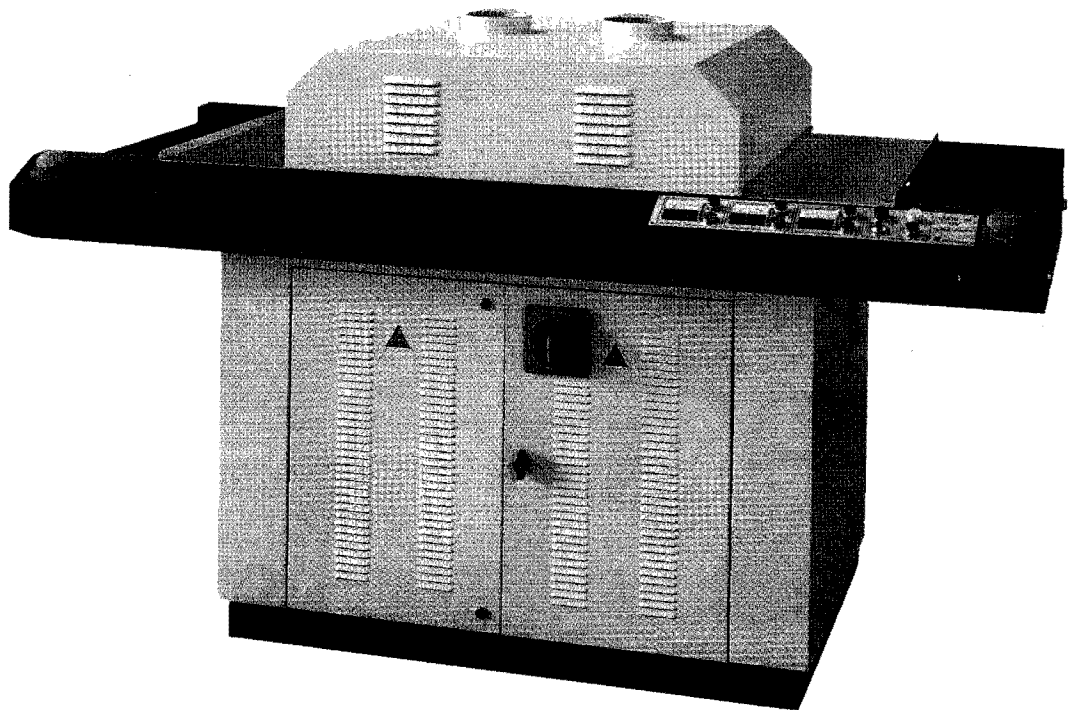


MOD. 923 U.V. CURING SYSTEM



OPERATING AND SERVICE MANUAL



Dynachem

NOTICE

PRIOR TO INSTALLING, OPERATING OR PERFORMING MAINTENANCE ON THE U.V. CURING SYSTEM THIS INSTRUCTION MANUAL SHOULD BE READ CAREFULLY.

"TO THE BEST OF OUR KNOWLEDGE THE INFORMATION CONTAINED HEREIN IS CORRECT, HOWEVER, DYNACHEM DOES NOT GUARANTEE THE COMPLETENESS OR ACCURACY OF THE INFORMATION. USER IS RESPONSIBLE FOR THE SAFE INSTALLATION AND OPERATION OF THE U.V. CURING SYSTEM".

**GENERAL
 SPECIFICATIONS**

1) Conveyor width	710 mm	28 inches
2) Working width	610 mm	24 inches
3) Type of Lamp	mercury vapour lamps	5000 W 5000 W

Electrical

4) Power type	3 phase; 50/60 Hz; Ground
5) Nominal voltage	380 - 415 - 480

Model	922	923
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6) Number of lamps	2	3
7) Power consumption (kVA)	13	15
8) Phase Amperage (Max)	380V 34A 415V 31A 480V 27A	37A 34A 29A

9) Lamp width	760 mm	30 inches
10) Cooling	Fan 1 x 1,1 kW Flow rate 2000 m³/h 1177 SCFM	2 x 0,75 kW 2000 m³/h 1177 SCFM

11) Conveyor Speed:	Stepless adjustment from 1 to 10 m/min (3 to 33 feet min)
12) Conveyor Height	950 mm 37.4 inches

Overall Dimensions

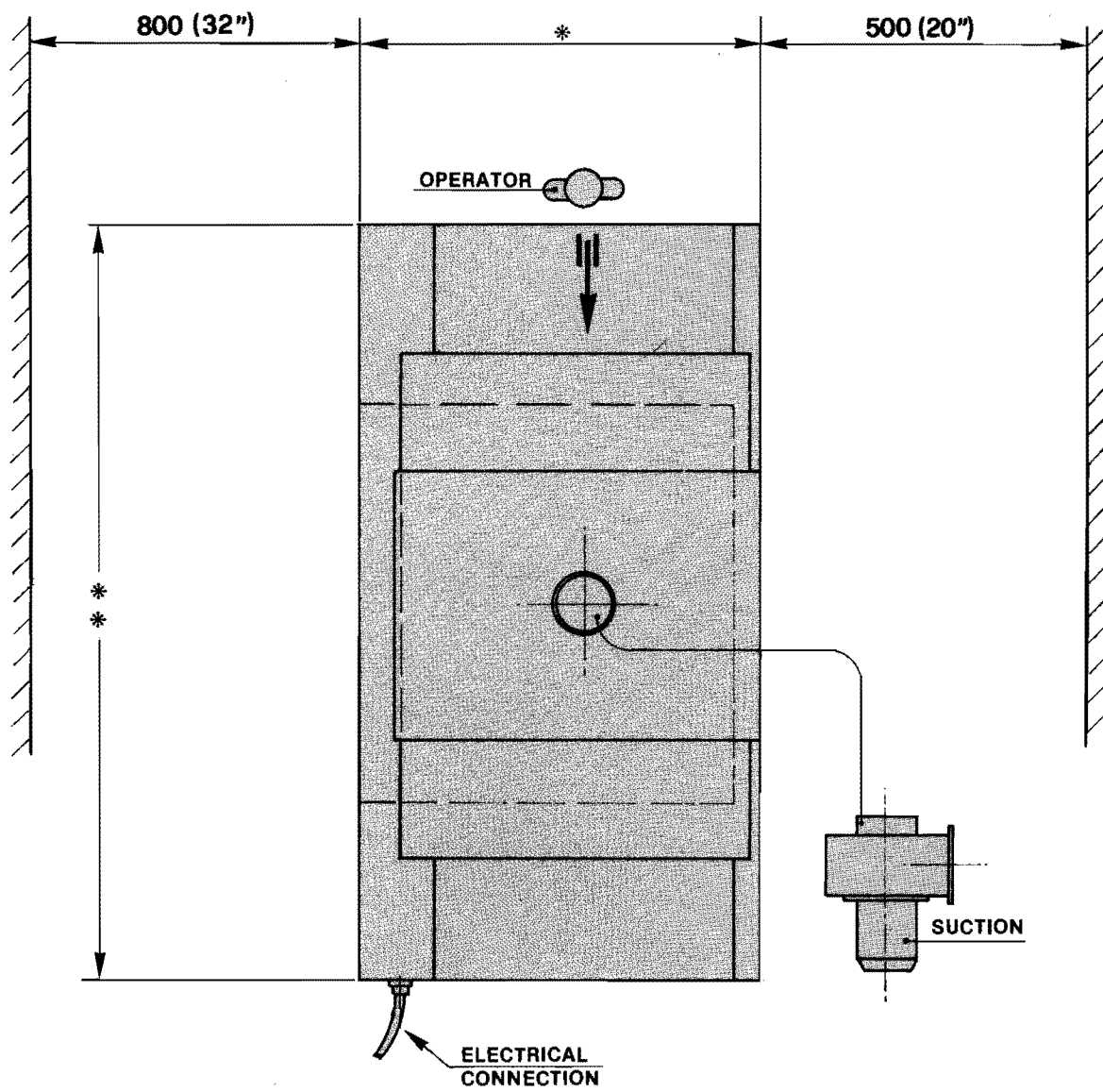
* 13) Width	2050 mm	80.7 inches
** 14) Length	980 mm	38.6 inches
15) Height	1230 mm	48.4 inches
16) Minimum space for operator (see floor plan)	800 mm	32 inches
17) Minimum space for maintenance (see floor plan)	500 mm	20 inches

Model	922	923
18) Gross Weight	640 kg 1410 lb	720 kg 1587 lb
19) Net Weight	440 kg 970 lb	510 kg 1124 lb
20) System flow rate requirement. The exhaust air volume is approximately 900 m ³ /h at 3 to 5 m from the machine (530 Ft ³ /min at 10 to 15 Ft)		
21) Pipe diameter to connect blower and machine is \varnothing . mm 150 (6 inches)		

**WORKING
CHARACTERISTICS**

- 1) Maximum thickness of the plate: 9 mm 0.350 inches

FLOOR PLAN



* - ** See general specification

WARRANTY

The U.V. curing system is warranted by Dynachem Corporation against defects in material and workmanship for a period of 90 days, from date of receipt by the customer, during which time Dynachem will be responsible for the replacement or repair, at its option, of any defective parts and for any labor charges connected with the repair of the U.V. curing system.

Dynachem, for an additional 90 days period, warrants that it will replace or repair, at its option, any part that proves to be defective; however, the customer will be responsible for all labor charges during this additional 90 days period.

Dynachem should be notified in writing of any defect in material or workmanship of the U.V. curing system and if so instructed by Dynachem, the U.V. curing system or any part thereof, will be shipped, freight paid by Dynachem, to Dynachem for repair.

Neither the U.V. curing system nor any part thereof is to be returned to Dynachem without written authorization from Dynachem.

This warranty is effective only under the condition that the U.V. curing system is installed in accordance with Dynachem specifications.

Additionally, the warranty is null and void if the U.V. curing system is abused or operated contrary to the instructions or if alterations or repairs are made by other than authorized Dynachem representatives or by written permission from Dynachem.

The warranty for the U.V. curing system does not cover the UV lamps except for original manufacturing defects reported during the warranty period.

Dynachem's liability for any breach of warranty is limited, as set out above, to repair or replacement of the defective part and labor charges in certain instances, and in no case shall Dynachem be responsible for any consequential damages, nor shall Dynachem's liability in any case exceed the amount of the purchase price of the U.V. curing system.

This warranty is expressly in lieu of all other warranties, express or implied, including the warranty of merchantability of fitness for a particular purpose.

DYNACHEM is a Registered Trademark

DESCRIPTION

The U.V. curing system has been specially designed for the safe and fast polymerization of the Ultra-Violet curable products, such as inks and dry film solder masks currently used in the manufacturing of printed circuit boards.

The wave-length of the U.V. curing system lamps coincides with the sensitivity curve of most UV curable products thus ensuring fast and reliable curing.

INSTALLATION

The U.V. curing system is delivered complete and is ready to operate as received. A few and easy operations have to be performed as described in the following.

Be sure to uncrate the U.V. curing system carefully and to inspect it immediately for shipping damage.

Report any damage to the area Dynachem Office and notify the responsible carrier in writing within 8 days from the delivery date.

The two mercury-vapour lamps are usually shipped in separate cardboard boxes: they should be carefully unpacked and mounted on their supports underneath lamp reflectors shields.

Caution:

Do not handle the lamps with bare hands. Oils from the skin will cause hot spots and permanent damage.

The hood can be easily lifted up and supported using the holding rod supplied.

Connect the U.V. curing system to electrical power.

The direction of the conveyor belt is set to normally rotate from left to right.

A powerful exhaust blower is supplied with the U.V. curing system: this should be placed in a convenient position (e.g. against a wall on a suitable support) and connected to the exhaust duct on top of the U.V. curing system lamp hood. A flexible exhaust hose is provided.

The purpose of this blower is to cool the lamps and to exhaust the ozone from the working area: therefore the warm air should be blown out of the working place.

Suitable electrical terminals are provided inside the U.V. curing system and the blower should be connected to them.

Switch on the «Main» switch of the U.V. curing system. This will start the blower: check the direction of rotation of the blower and reverse two wires if necessary.

Push «SET UP» button and adjust conveyor speed turning the potentiometer.

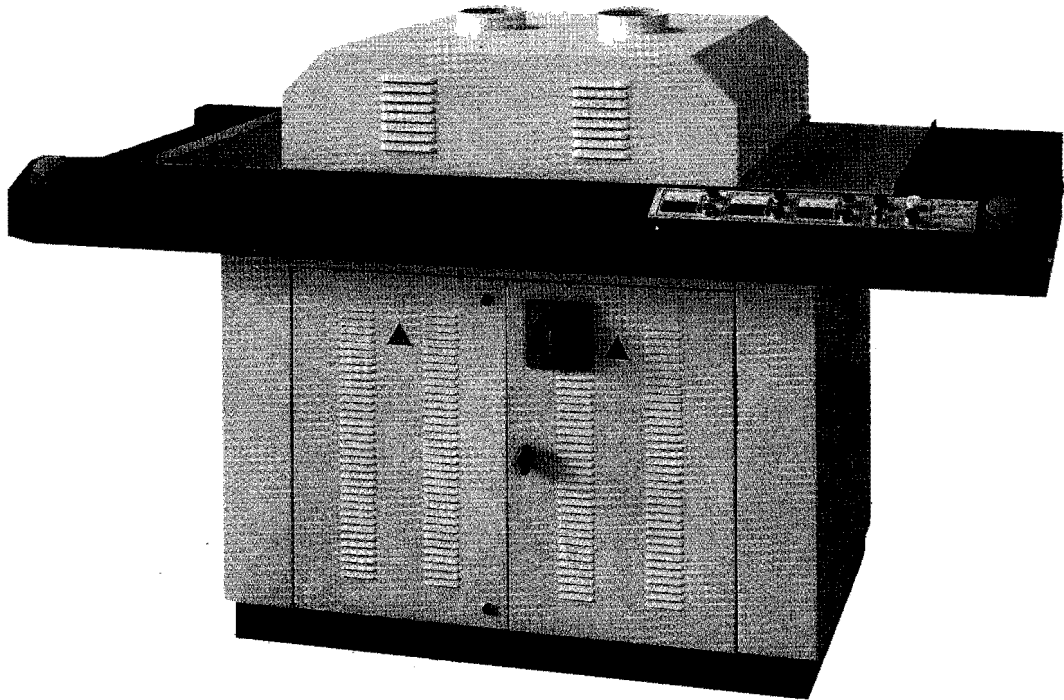
Switch on the lamps, one at the time, waiting two minutes among the lighting of each lamp, in this way you will avoid current rush.

MAINTENANCE

The conveyor belt is provided with lateral guides which prevent it from running out of the support rollers.

Should however the belt tend to move off center, loosen the rollers by underscrewing the two allen screws located underneath and move slightly one side of the roller in question by means of the relative belt-tensioning screw.

The only lubrication required is a small dab of gear grease in roller bearings as well as a little chain oil on drive chains this should be done during routine preventative maintenance service.



SPARE PARTS ORDERS

To avoid errors when ordering parts, we suggest that the following information be included with the order:

FIG. **6**

U.V. CURING SYSTEM 24"

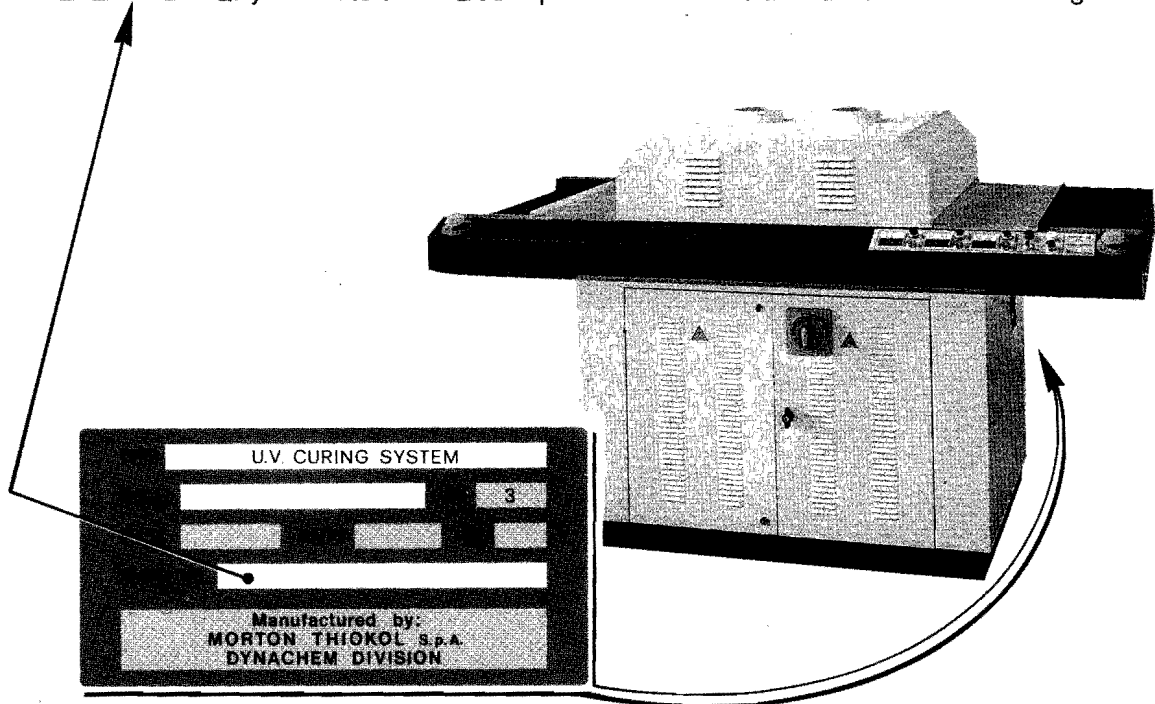
REF.	DESCRIPTION	PART NUMBER
1	Exhaust pipe D 150 (10 mt)	218-22-302-00
2	Safety lockable device	218-22-303-00
3	Blower U/IHC 182M Utentra	218-20-116-00
4	Muffin fan 50/60Hz 15/18W	18-00-047-00

U.V. CURING SYSTEM 32"

REF.	DESCRIPTION	ART NUMBER
1	Exhaust pipe D 150 (10 mt)	226-22-302-00
2	Safety lockable device	226-22-303-00
3	Blower U/IHC 182M Utentra	226-20-116-00
4	Muffin fan 50/60Hz 15/18W	226-00-047-00

Kindly supply the machine:

Serial number _____ Q.ty _____ Ref. _____ Description _____ Part number _____ Fig. _____



Exact shipping address _____

Shipping method _____

Orders should be placed with your local Dynachem office or distributor.

STANDARD ABBREVIATIONS USED FOR PARTS DESCRIPTIONS

A	Amps
ASSY	Assembly
BOT	Bottom
CIR	Circuit
CYLN	Cylinder
COMPL	Complete
CONN	Connector
CTR	Centering
CU	Centering unit
D	Diameter
DIMEN	Dimension
EV	Electrovalve
FED	Feed
HR	Hot roll
IND	Indicator
JOG	Jogging
LAM	Lamination
LAT CUT	Lateral cutting
LEN	Length
LFT	Left
LUBE	Lubricating
OV	Old Version
PH	Phase
PN	Part Number
PNEUM	Pneumatic
REL	Release
REG	Regulator
RT	Right
SECT	Section
SH	Shore
SPROCK	Sprocket
SUPP	Support
SW	Switch
TEMP	Temperature
TRNS	Transport
V	Volts
VERT	Vertical

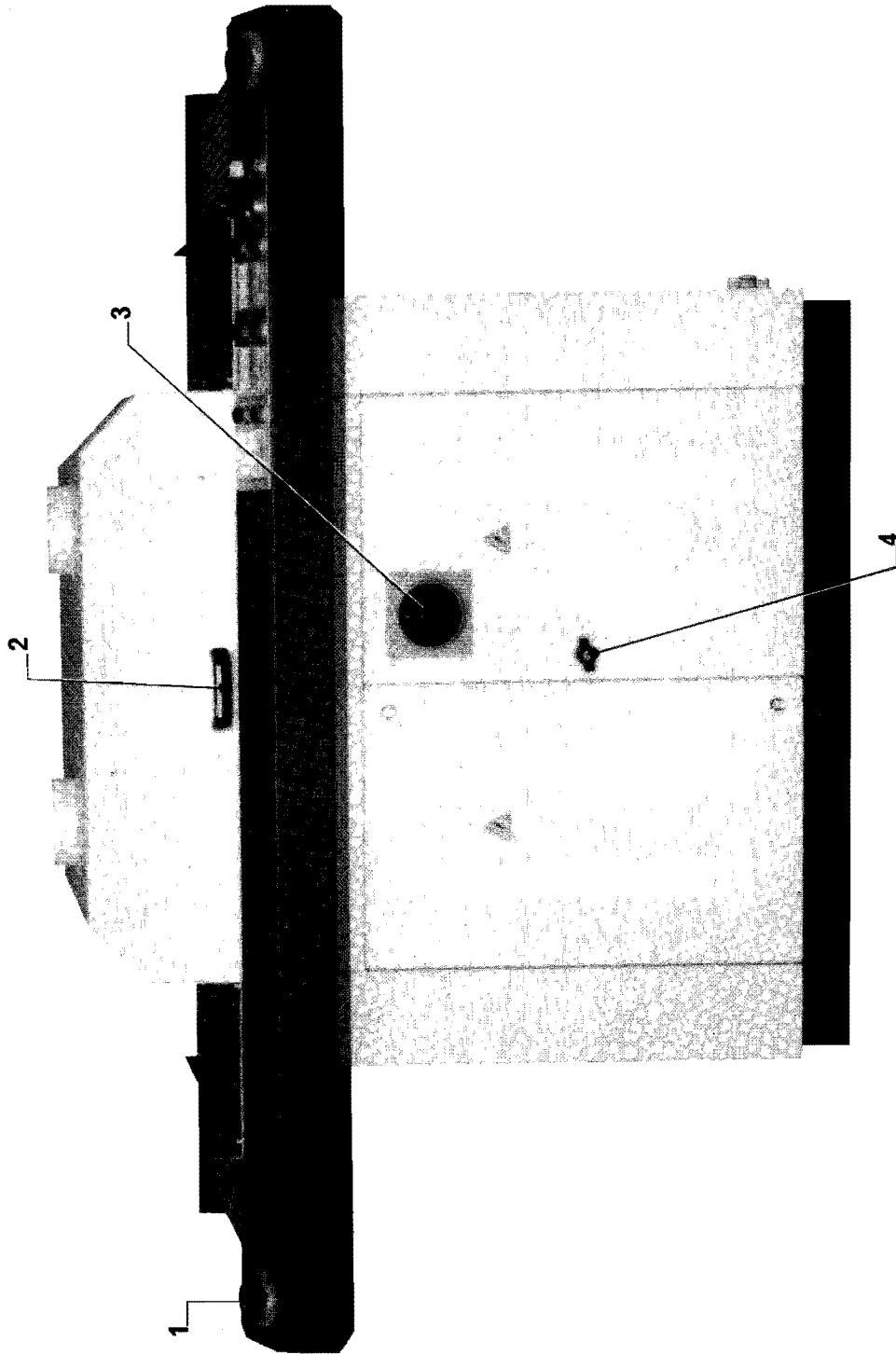
**MASTER LIST
ELECTRIC PARTS**

PART NUMBER	DESCRIPTION
218-00-001-00	P.C.B. Driver ESOVAR 53 or 51
218-00-002-00	Gearmotor WEG KGG-613 G13
218-00-025-00	Emergency stop button assy.
218-00-025-01	. Red mushroom head 077 EER
218-00-025-02	. Normal closed contact 077 E01
218-00-026-00	Mercury vapor lamp 5000W 760 mm
218-00-045-00	Ground terminal block EK 16/32
218-00-046-00	Wire terminal block SAK 4/32
218-00-047-00	Muffin fan 50/60 Hz 15/18W
218-20-100-00	Main transformer 8.4 KVA (2° serie) 380V/50 Hz
218-20-100-01	. Main transformer 8.4 KVA (2° serie) 220V/50 Hz
218-20-100-02	. Main transformer 8.4 KVA (2° serie) 415V/50 Hz
218-20-100-03	. Main transformer 8.4 KVA (2° serie) 480V/60 Hz
218-20-101-00	Fuse 5 x 20 1A Omega
218-20-101-01	. Terminal block connection fuse holder SAKS1
218-20-102-00	Lamp contactor
218-20-103-00	Bulb 24V
218-20-104-00	Ampmeter M170 10/5 Pantec
218-20-105-00	Hozone free UV Bulbs L80-68-H
218-20-106-00	Capacitor 4 F 1200V
218-20-107-00	Main sw 503-110P Breter
218-20-108-00	3 PH OK light ind 105 DTL 500
218-20-109-00	3 PH microswitch 114-FT03
218-20-110-00	Safety line magnetic sw QT (Specify voltage)
218-20-111-00	Safety 1ry transformer Q1
218-20-112-00	Auxiliary transformer T1
218-20-113-00	Safety 2ry coil 220V transformer Q2
218-20-114-00	Safety 2ry coil 24V transformer Q3
218-20-115-00	Safety blowers magnetic sw Q4-Q5
218-20-116-00	Blower U/HC 182M Utentra 380V/50 Hz
218-20-116-01	. Blower U/HC 182M Utentra 415V/50 Hz
218-20-116-02	. Blower U/HC 182M Utentra 480V/60 Hz
218-20-117-00	Safety gearmotor mag. sw Q6
218-20-118-00	Speed adjustment potentiometer
218-20-119-00	Amperometric transformer TAPK 10/5
218-20-120-00	Pilot lamp power on assy (Specicity color)
218-20-120-01	. White head ind 080LSFB
218-20-120-02	. Red head ind 080LSFR
218-20-120-03	. Lamp holder 080ADV
218-20-121-00	Blowers main contactor K1.
218-20-122-00	Push button assy (Specify color)
218-20-122-01	. Yellow head ind 080PLGG
218-20-122-02	. Green head ind 080PLVG
218-20-122-03	. 1 N.O. + 1 N.C. contact 080 B11V
218-20-122-04	. 1 N.O. contact 080 B10V

PART NUMBER	DESCRIPTION
218-20-123-00	Safety microswitch AZ15ZVR
218-20-124-00	Switchoff lamps push button assy
218-20-124-01	. Red head 080PRG
218-20-124-02	. 1 N.C. contact 080F01V
218-20-125-00	Hour counter HCM72 12/24 Vdc
218-20-126-00	RC-ARC voltage filter
218-20-127-00	Diode rectifier bridge KBL04
218-20-128-00	Relay LY2 12AC
218-20-128-01	. Socket relay PTF08A
218-20-129-00	Relay MY2 24AC
218-20-129-01	Socket relay PYF 08A
218-20-132-00	Lamps housing handle
218-20-134-00	Heigh voltage insulation cable

**MASTER LIST
MECHANIC PARTS**

PART NUMBER	DESCRIPTION
218-02-005-00	Conveyor belt 710 mm (4,05 mt)
218-02-006-00	Chain drive 3/8 x 7/32
218-02-007-00	Trns roll D 100 x 717 - Drive
218-02-008-00	Trns roll D 60 x 717 - Drive
218-02-009-00	Sprock Z 10 3/8
218-02-010-00	Sprock Z 14 3/8
218-02-011-00	Sprock Z 24 3/8
218-02-012-00	Sprock Z 30 3/8
218-02-048-00	New reflector
218-22-300-00	Brakets lamps supporting
218-22-301-00	Ceramic faston sup
218-22-302-00	Exhaust pipe D 150 (10 mt)
218-22-303-00	Safety lockable device



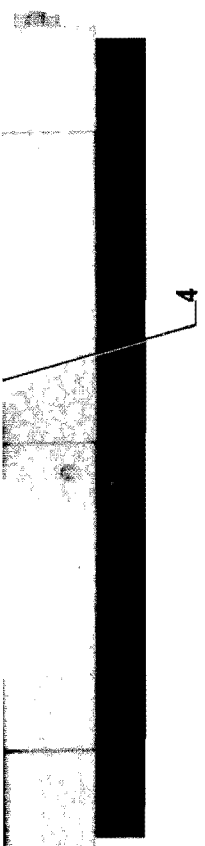
NOTE

ISSUED 1.0387

REV.

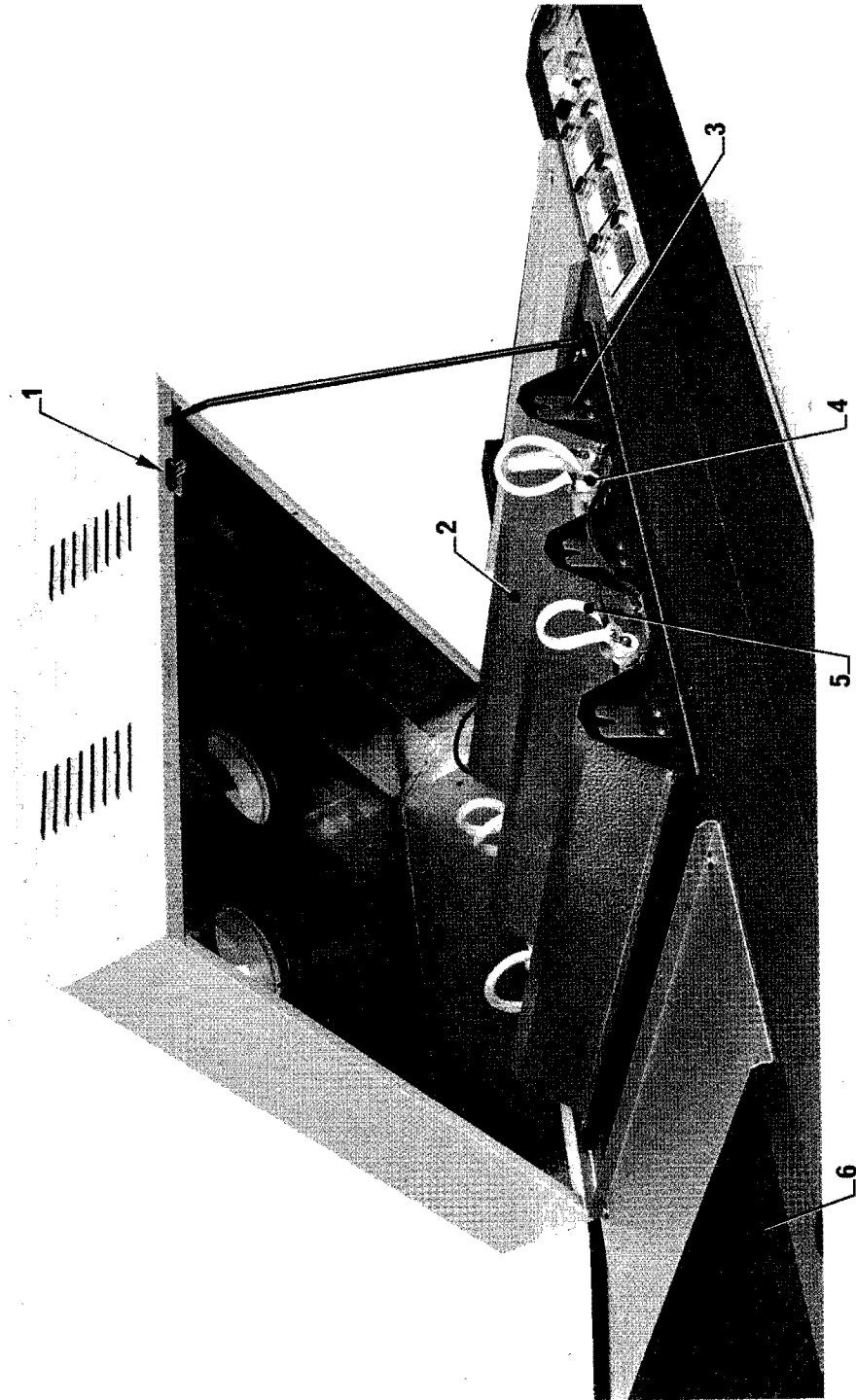
U.V. CURING SYSTEM 24"

REF.	DESCRIPTION	PART NUMBER
1	Emergency stop button assy	218-00-025-00
2	Lamps housing handle	218-20-132-00
3	Main sw 503-110P Breter	218-20-107-00
4	Safety lockable device	218-22-303-00



ISSUED 1.0387

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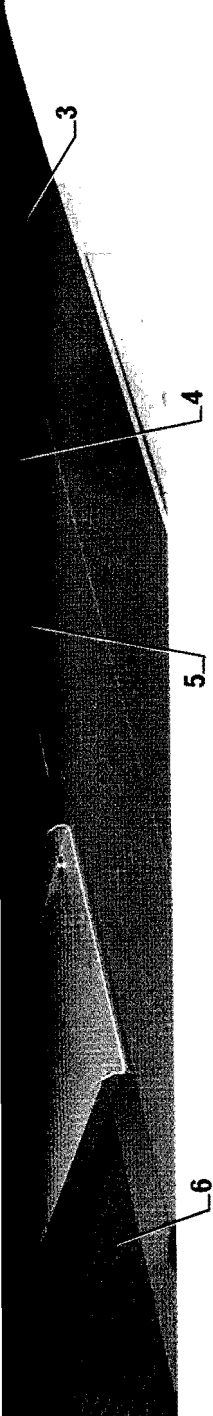


NOTE

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REV. _____

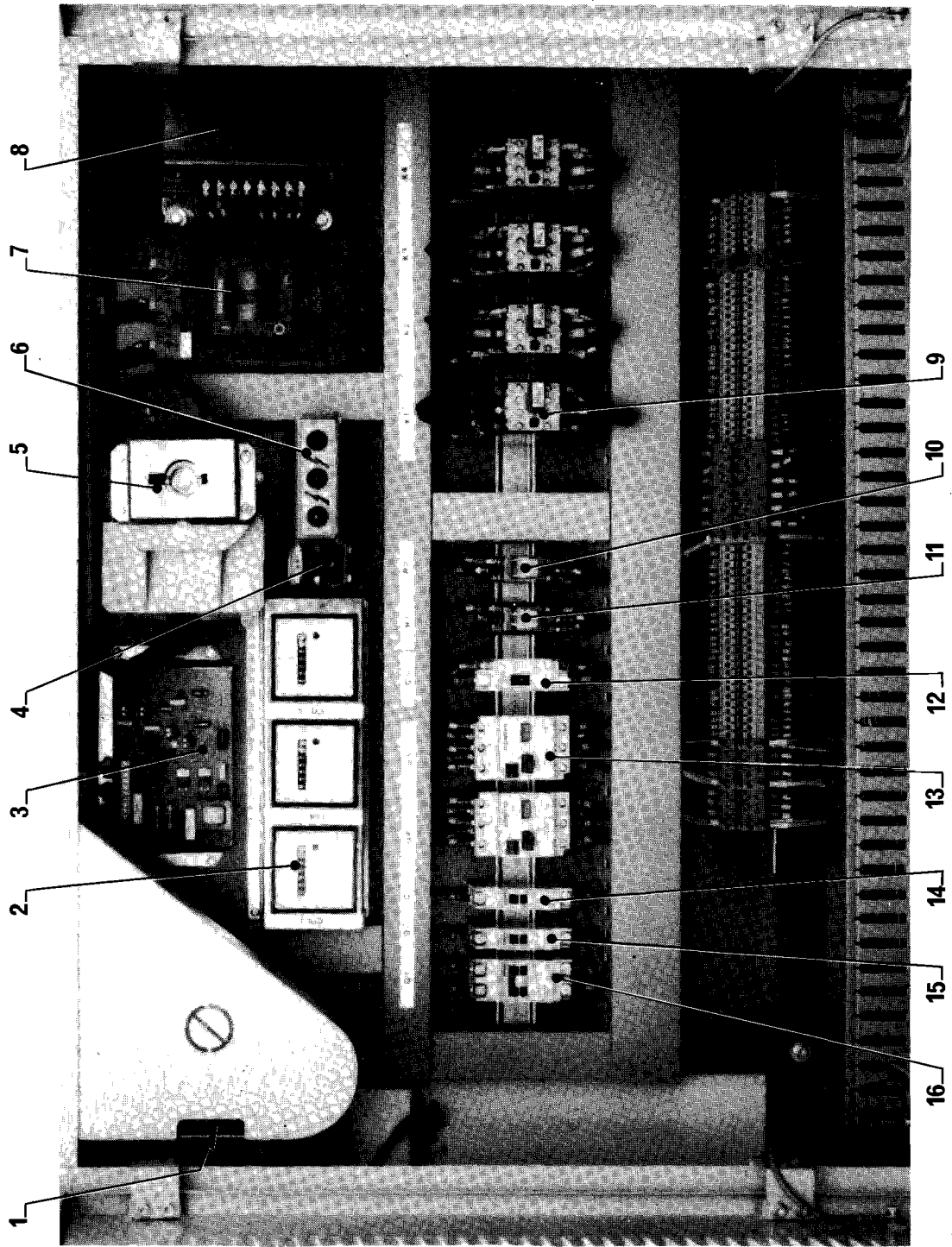
U.V. CURING SYSTEM 24"

REF.	DESCRIPTION	PART NUMBER
1	Safety microswitch AZ15ZVR	218-20-123-00
2	New reflector	218-02-048-00
3	Brakets lamps supporting	218-22-300-00
4	Ceramic faston sup	218-22-301-00
5	Heigh voltage insulation cable	218-20-134-00
6	Conveyor belt 710 mm (4,05 mt)	218-02-005-00



ISSUED 1.0387

REV.

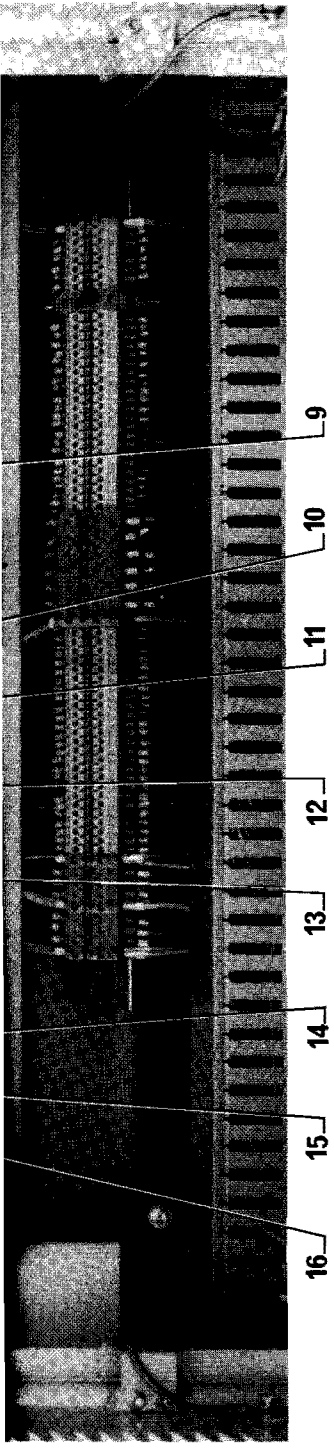


NOTE

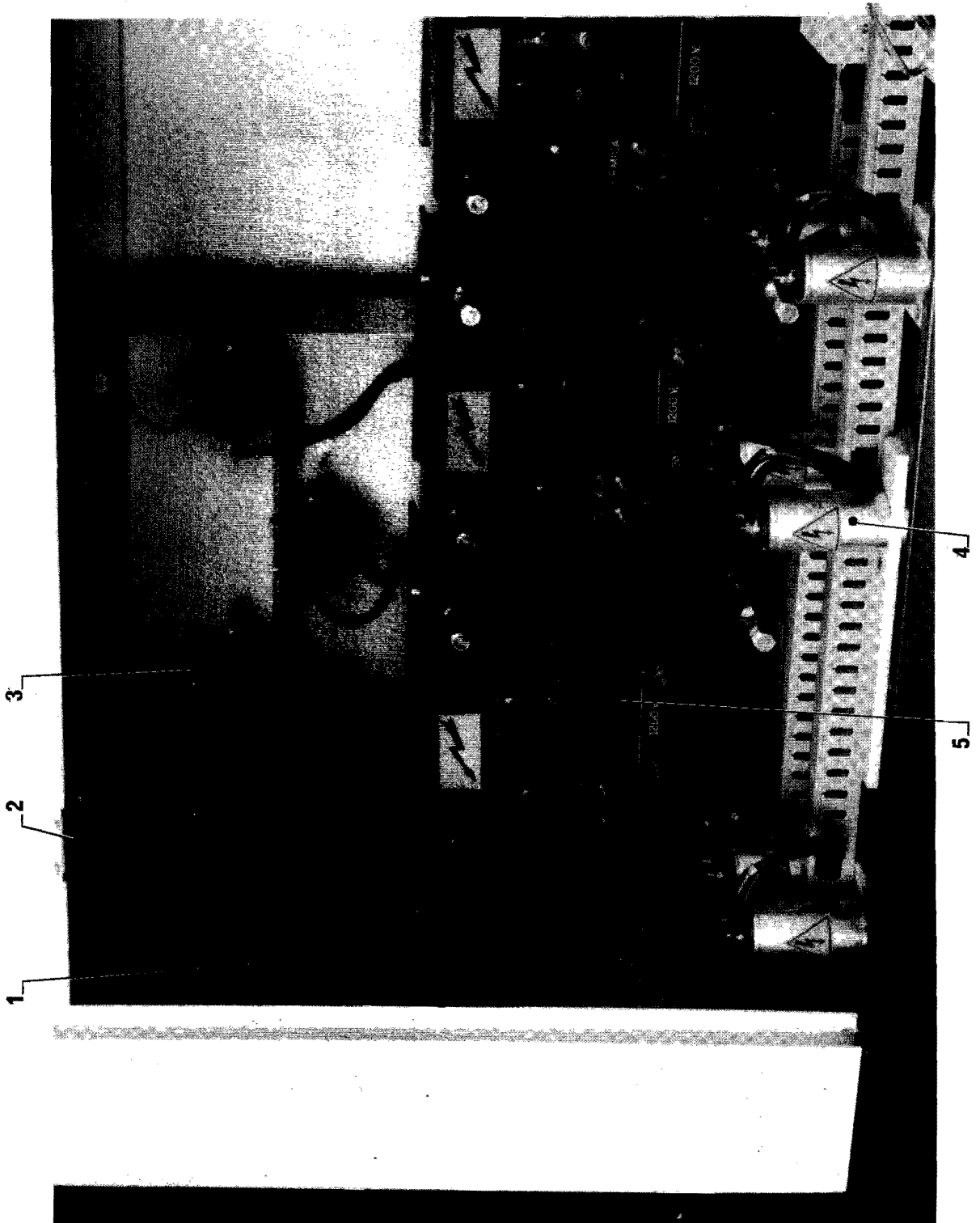
ISSUED 1.0387

REV.

U.V. CURING SYSTEM 24"



REF.	DESCRIPTION	PART NUMBER
1	Gearmotor WEG KGG-613 G13	218-00-002-00
2	Hour counter HCM72 12/24 Vdc	218-20-125-00
3	P.C.B. Driver ESOVAR 53 or 51	218-00-001-00
4	3 PH microswitch 114-FT03	218-20-109-00
5	Main sw 503-110P Breter	218-20-107-00
6	3 PH OK light ind 105 DTL 500	218-20-108-00
7	Safety line magnetic sw QT (Specify voltage)	218-20-110-00
8	Auxiliary transformer T1	218-20-112-00
9	Blowers main contactor K1	218-20-121-00
10	Relay LY2 12AC	218-20-128-00
11	Relay MY2 24AC	218-20-129-00
12	Safety gearmotor mag. sw Q6	218-20-117-00
13	Safety blowers magnetic sw Q4-Q5	218-20-115-00
14	Safety 2ry coil 24V transformer Q3	218-20-114-00
15	Safety 2ry coil 220V transformer Q2	218-20-113-00
16	Safety 1ry transformer Q1	218-20-111-00



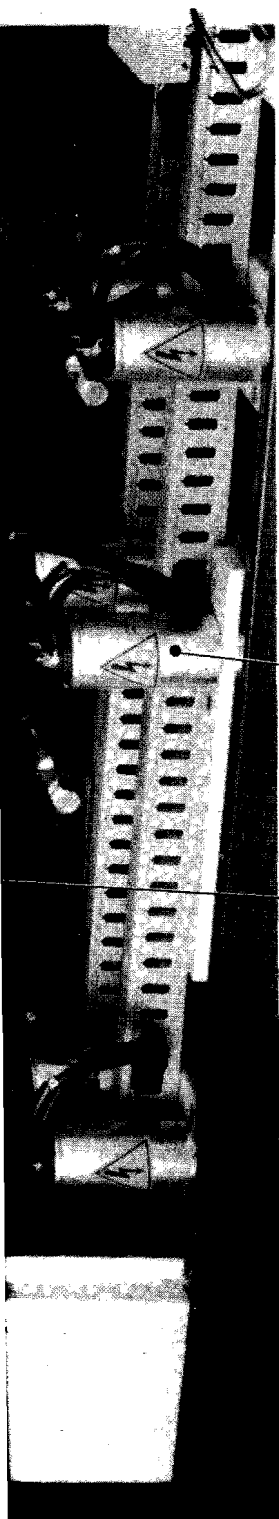
NOTE

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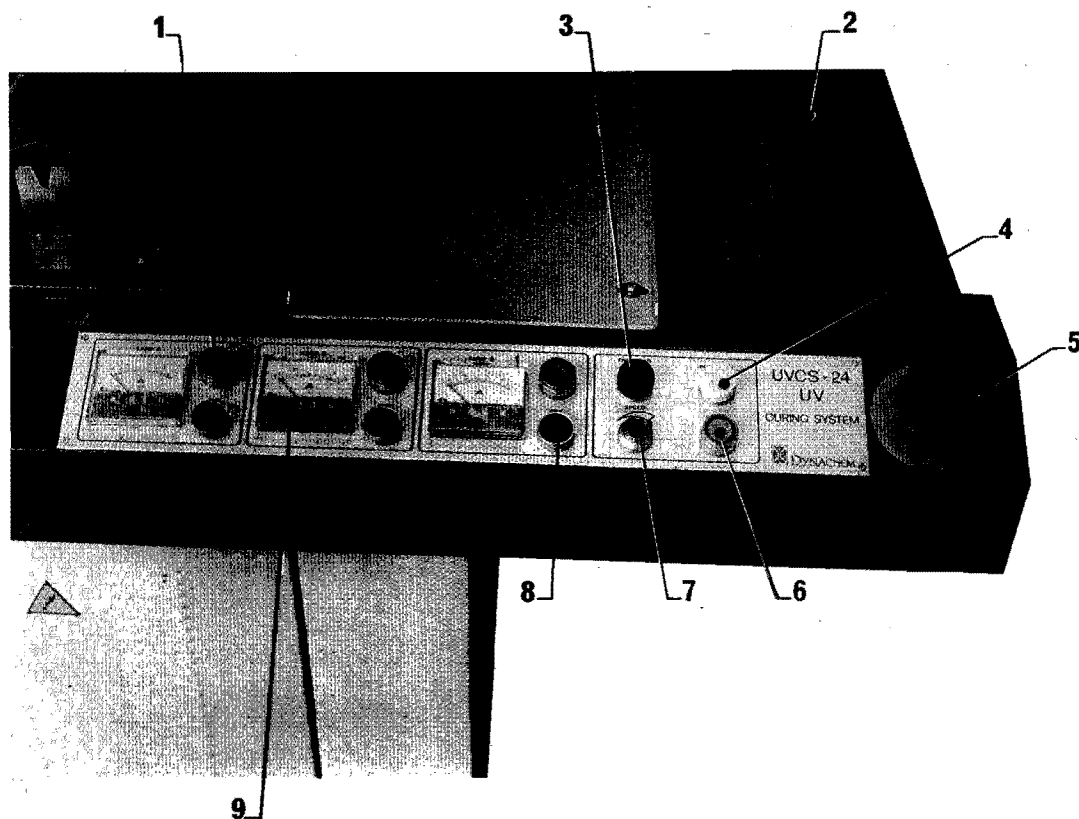
U.V. CURING SYSTEM 24"

REF.	DESCRIPTION	PART NUMBER
1	Muffin fan 50/60 Hz 15/18W	218-00-047-00
2	Safety microswitch AZ15ZVR	218-20-123-00
3	Amperometric transformer TAPK 10/5	218-20-119-00
4	Capacitor 4 μ F 1200V	218-20-106-00
5	Main transformer 8.4 KVA (2° serie)	218-20-100-00



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REV.

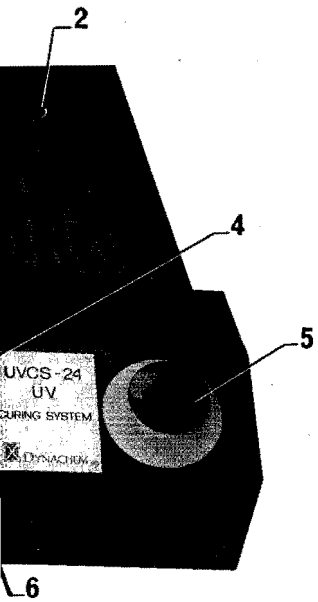


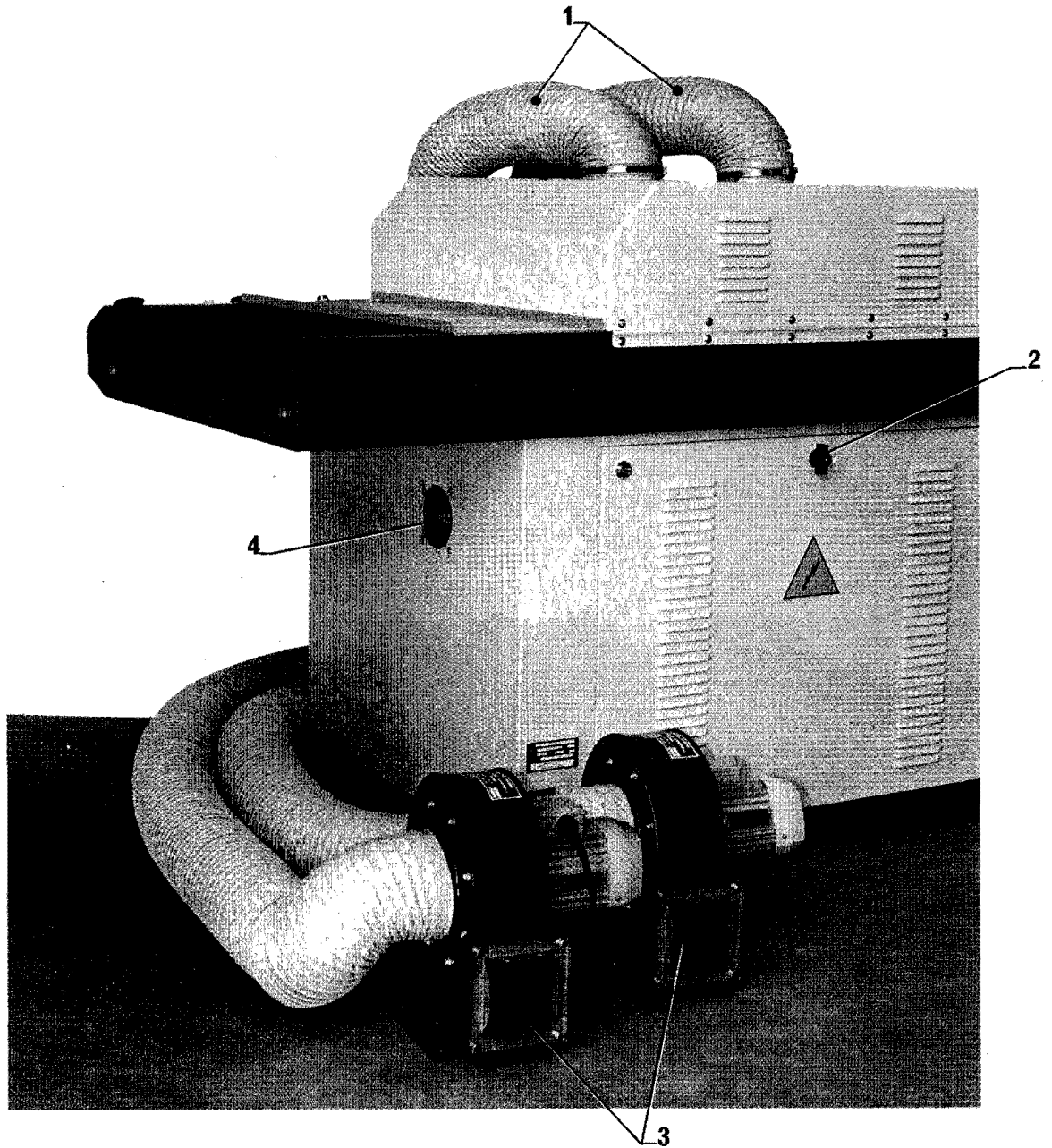
NOTE

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REV.

U.V. CURING SYSTEM 24"

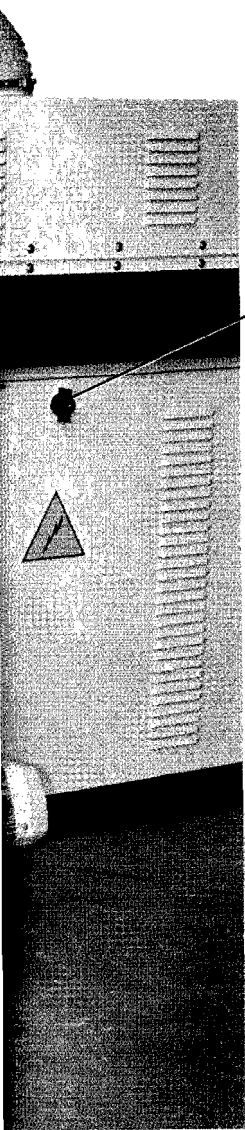
REF.	DESCRIPTION	PART NUMBER
1	Push button assy (Specify color)	218-20-122-00
2	Conveyor belt 710 mm (4,05 mt)	218-02-005-00
3	Pilot lamp power on assy (Specify color)	218-20-120-00
4	Pilot lamp power on assy (Specify color)	218-20-120-00
5	Emergency stop button assy	218-00-025-00
6	Push button assy (Specify color)	218-20-122-00
7	Speed adjustment potentiometer	218-20-118-00
8	Switchoff lamps push button assy	218-20-124-00
9	Ampmeter M170 10/5 Pantec	218-20-104-00



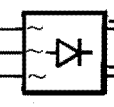



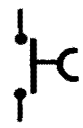




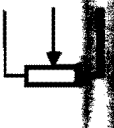














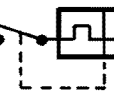

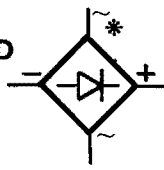
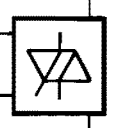





U.V. CURING SYSTEM 24"

REF.	DESCRIPTION	PART NUMBER
1	Exhaust pipe D 150 (10 mt)	218-22-302-00
2	Safety lockable device	218-22-303-00
3	Blower U/HC 182M Utenra 380V/50 Hz	218-20-116-00
4	Muffin fan 50/60Hz 15/18W	218-00-047-00

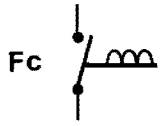


		Block connection	R		Coil of relay	D	
CN		Male - female connector			Contact N.O.	D	
S		Push button N.O.			Contact N.C.		
S		Push button N.C.			Contact N.O. + N.C.	RV	
Fc		Microswitch N.O.	CA		Condenser	C	
Fc		Microswitch N.C.	F		Fuse holder	AZ	
Fc		Proximity switch ind.	F		Block connection fuse holder	RL	
Fc		Proximity switch cap.	L		Pilot lamp	L	
Ev		Electrovalve	S		Switch	Q	
Ev		Electrovalve	D		Rectifier + cooling system	K	
RE		Resistor					

R1
4.6

Column where command is positioned

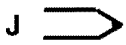
Page where command is positioned



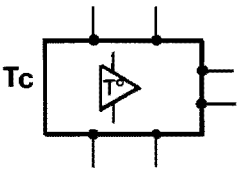
Air pressure gauge



Contact brush + connector ring



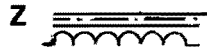
Thermocouple



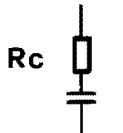
Temperature regulator



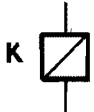
Reactance



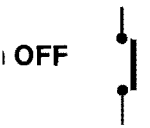
Inductance



RC-ARC voltage filter



Coil of remote control switch



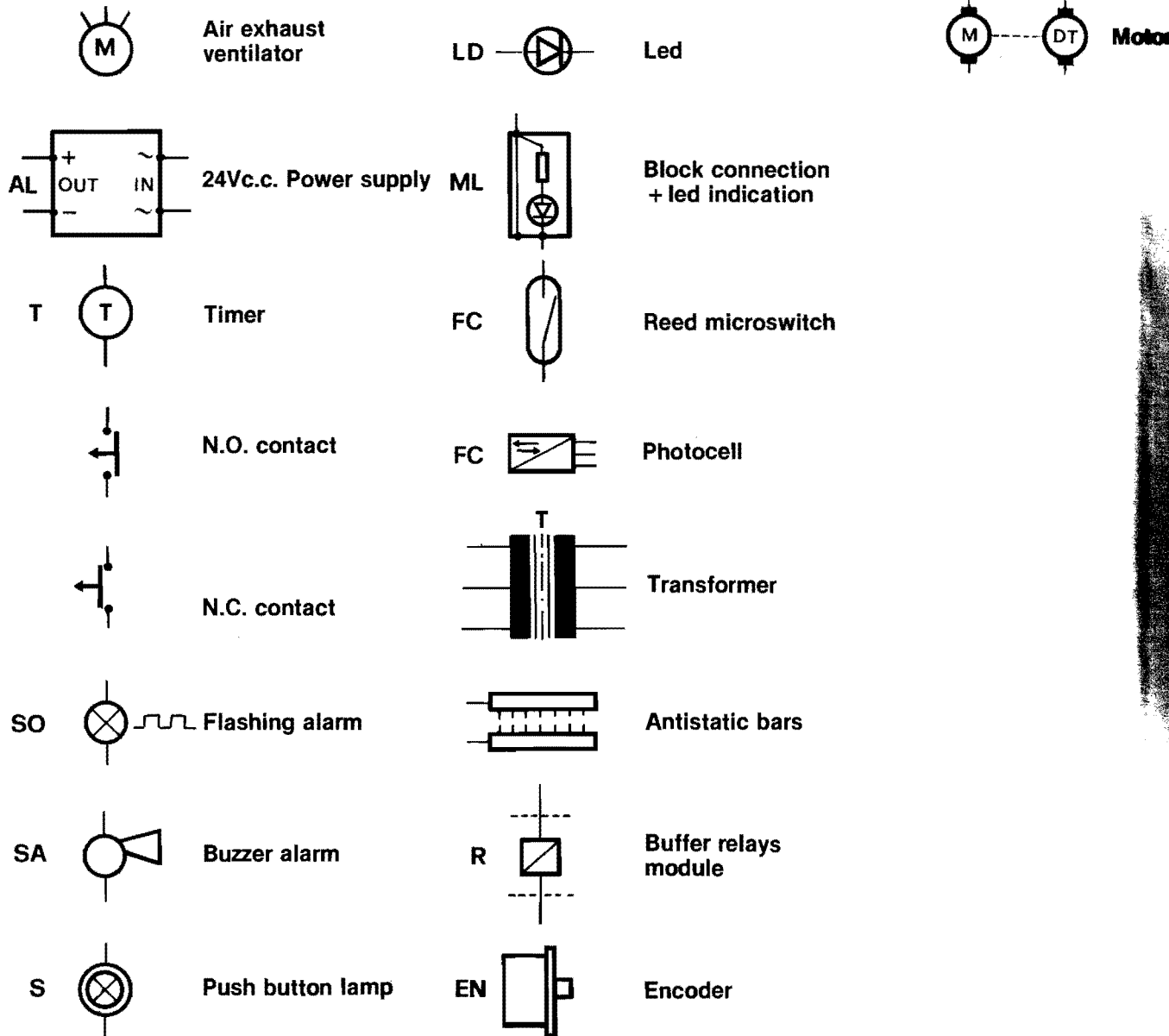
Contact N.O.

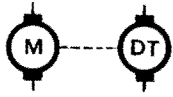


Contact N.C.

Dynachem U.V. CURING SYSTEM

2/3/4 LAMP - 220/380/415/480V - 50/60 Hz

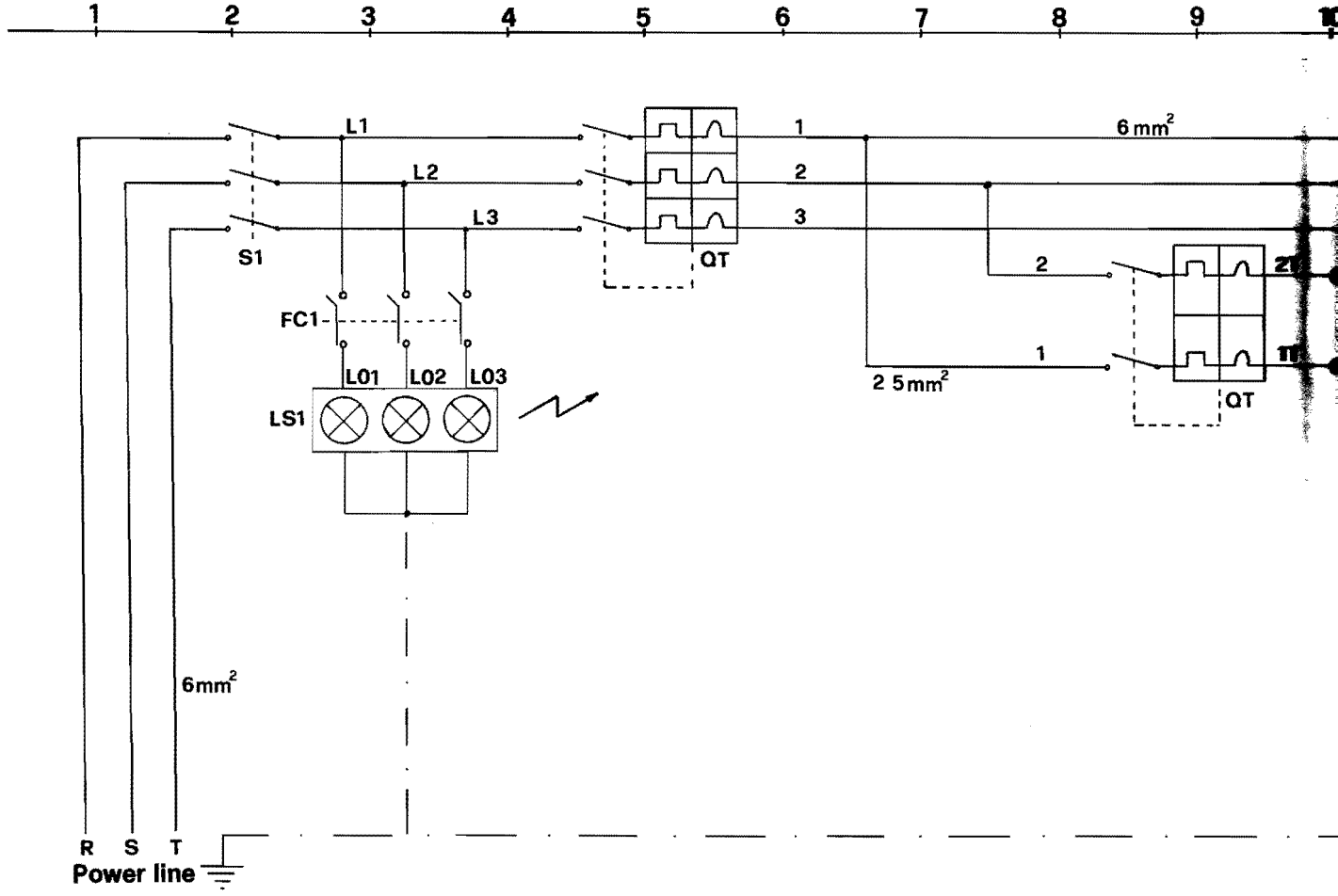




Motor + dynamo

son

Rich



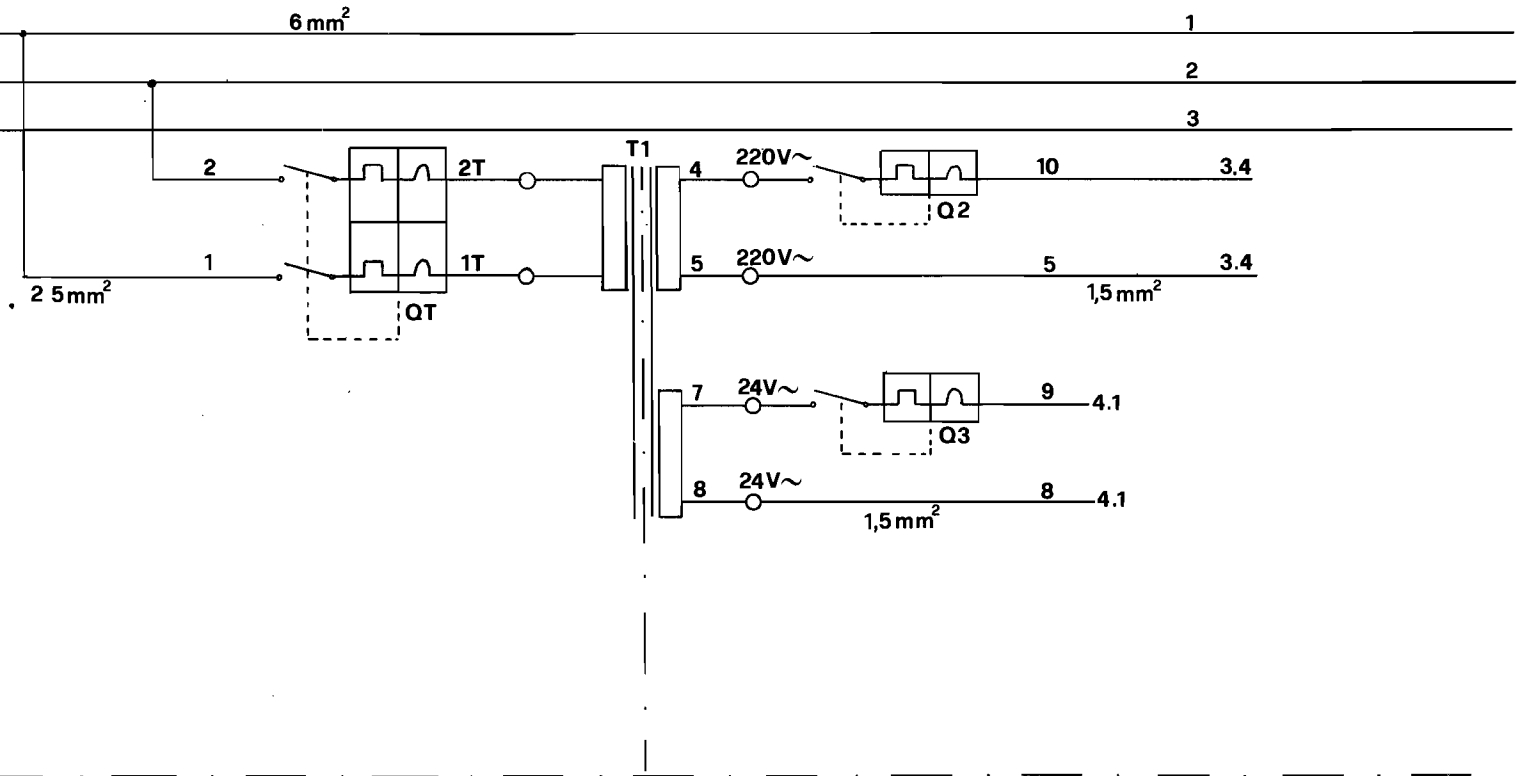
Main power switch

3PH OK light indicator

Safety line magnetic switch

Safety transformer magnetic switch

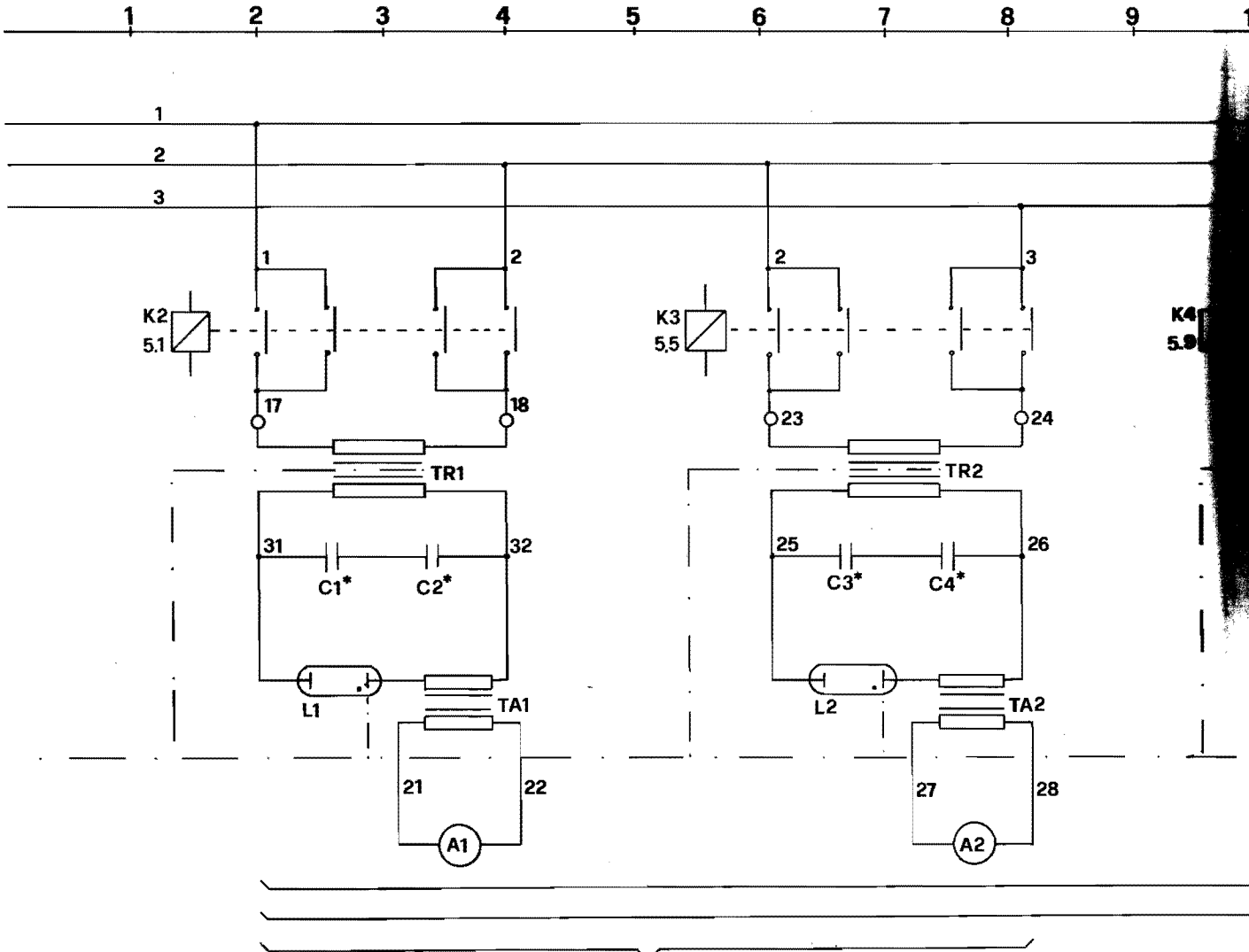
7 8 9 10 11 12 13 14 15 16



Safety transformer
magnetic switch

Auxiliary transformer

Safety 2ry coils
transformer Q2-Q3



Lamp 1

Amperometer 1

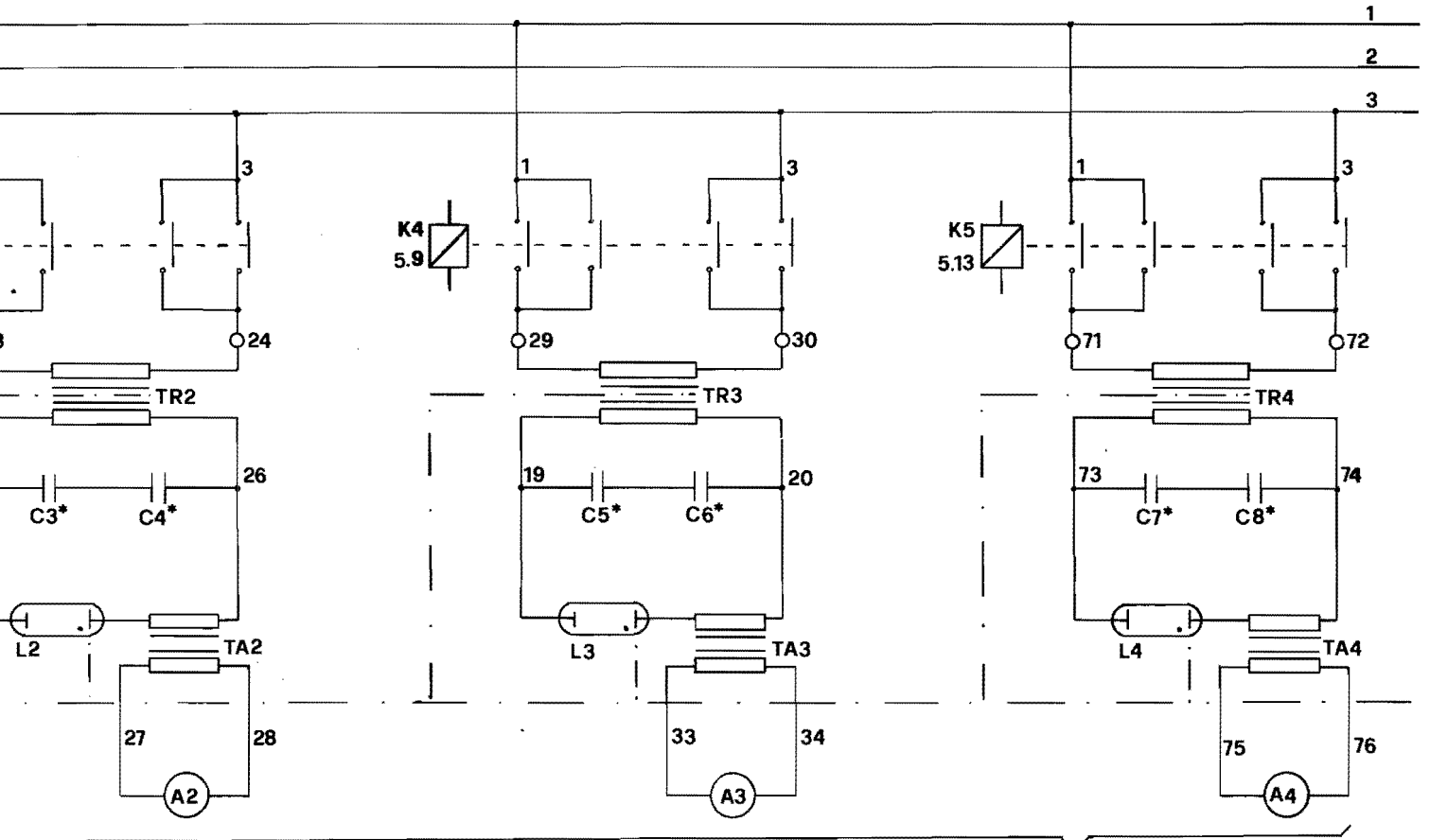
Circuit for 2
lamps unit

Lamp 2

Amperometer 2

Circuit for 2

7 8 9 10 11 12 13 14 15 16



Lamp 2

Amperometer 2

Circuit for 3 lamps unit

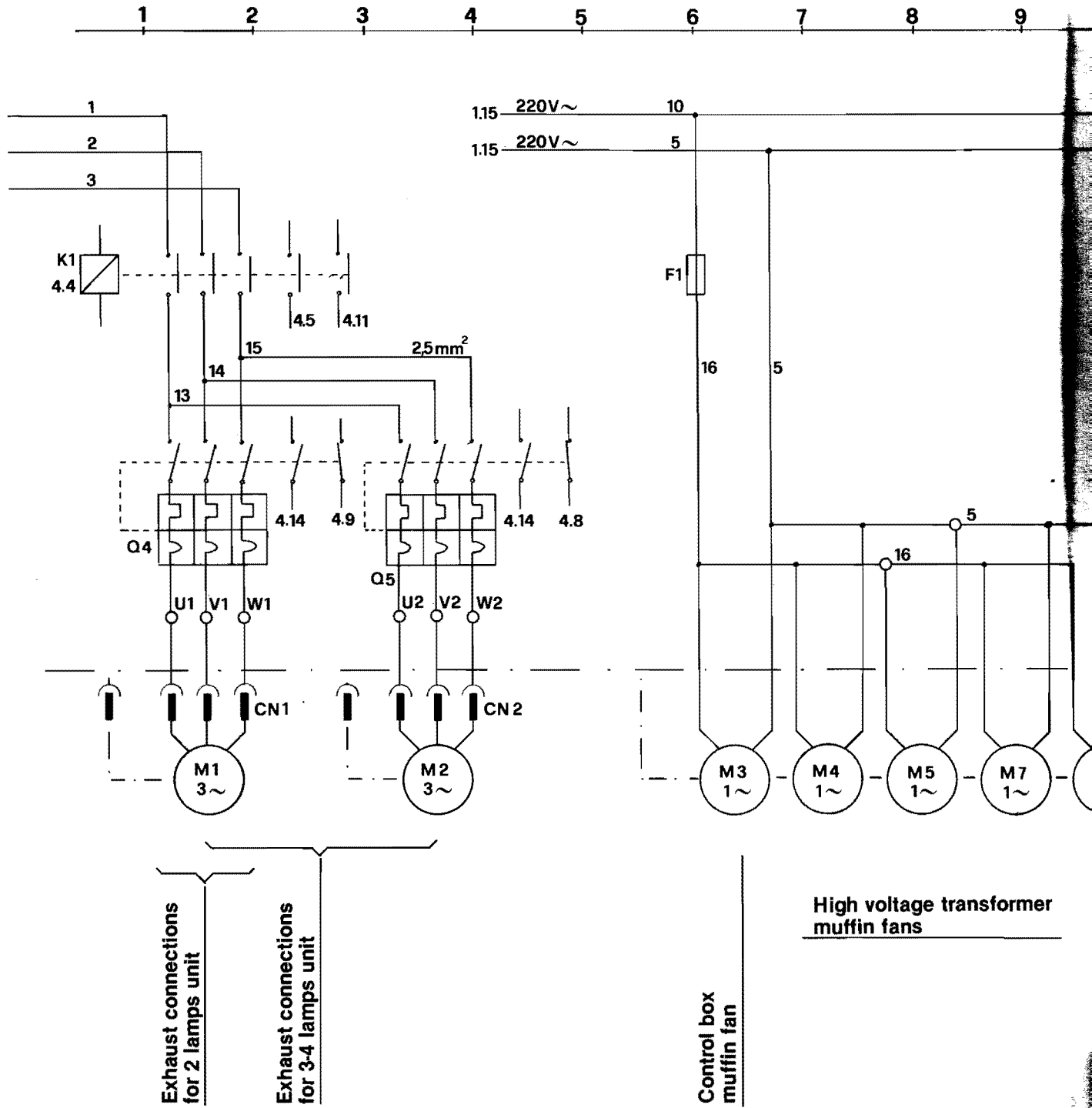
Lamp 3

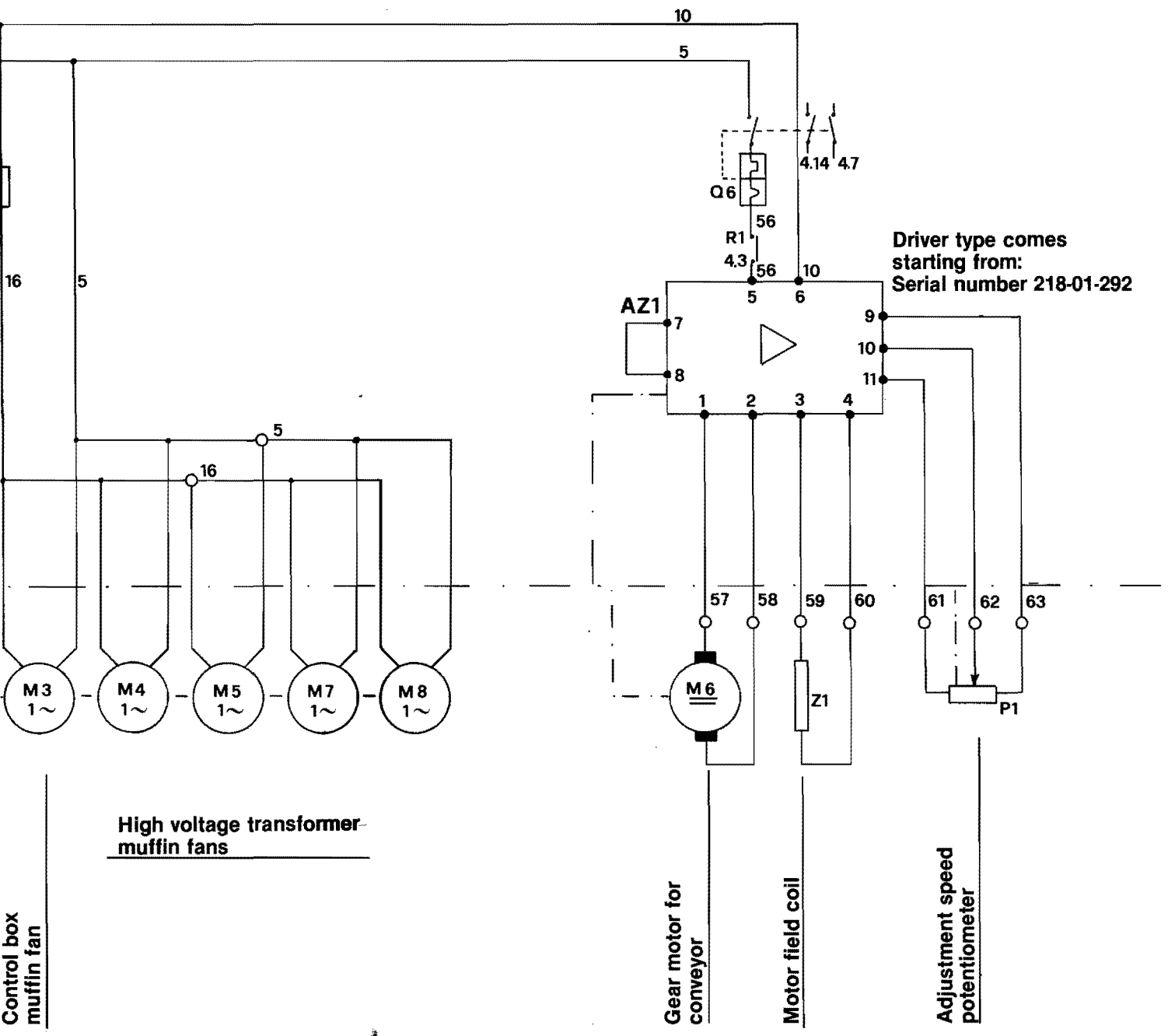
Amperometer 3

Circuit for 4 lamps unit

Lamp 4

Amperometer 4





Driver type comes starting from: Serial number 218-01-292

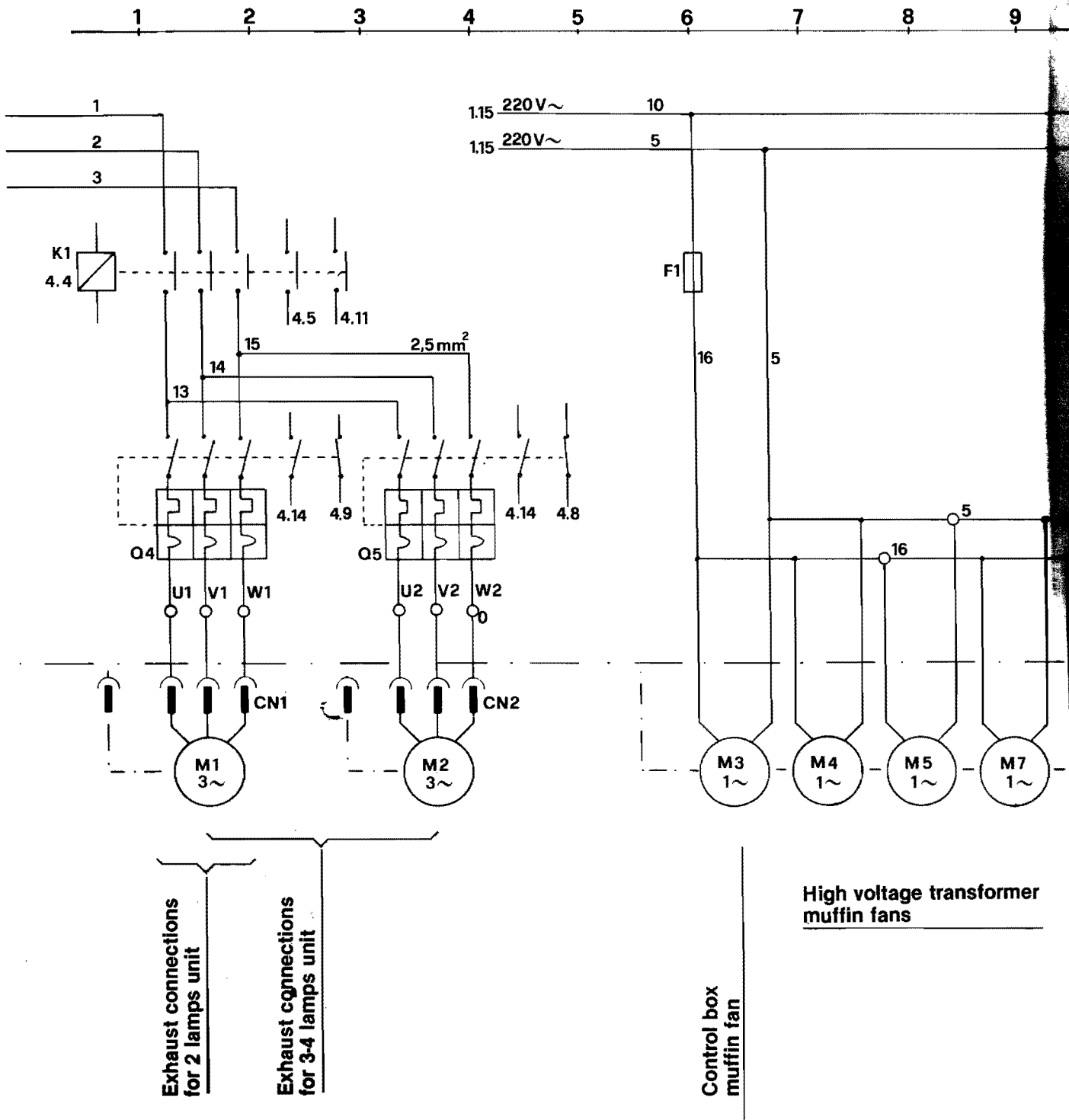
High voltage transformer-muffin fans

Control box muffin fan

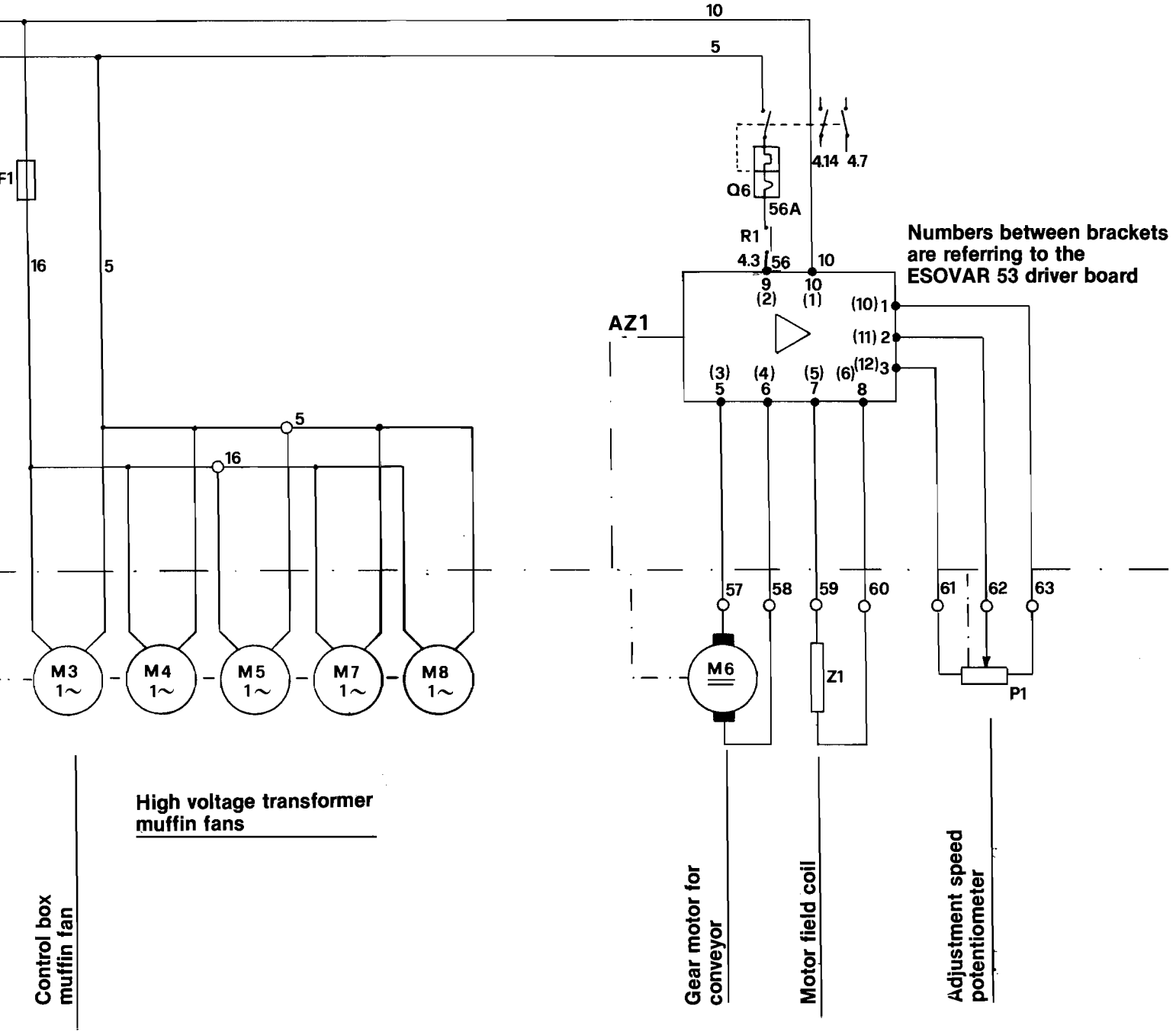
Gear motor for conveyor

Motor field coil

Adjustment speed potentiometer



6 7 8 9 10 11 12 13 14 15 16



Numbers between brackets are referring to the ESOVAR 53 driver board

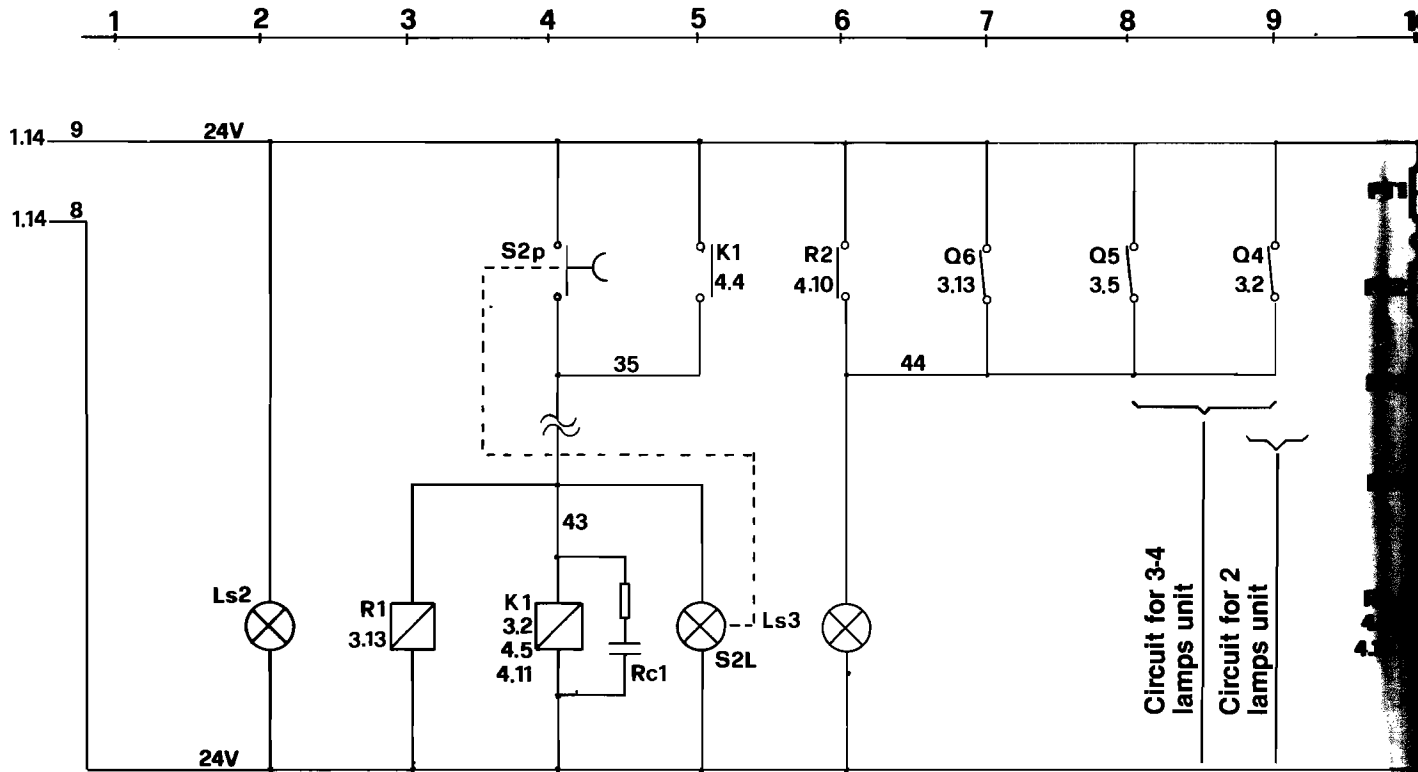
High voltage transformer muffin fans

Control box muffin fan

Gear motor for conveyor

Motor field coil

Adjustment speed potentiometer

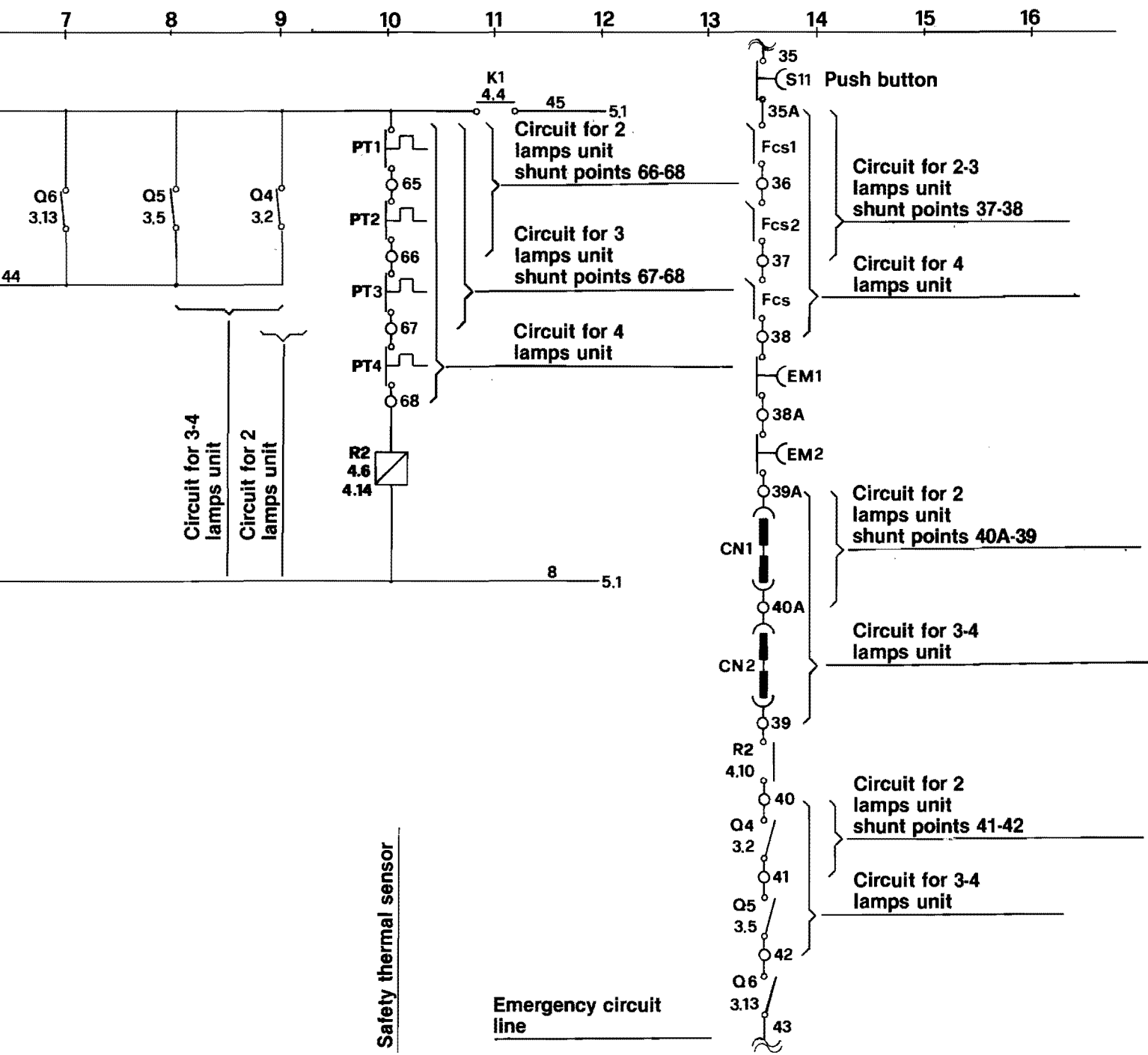


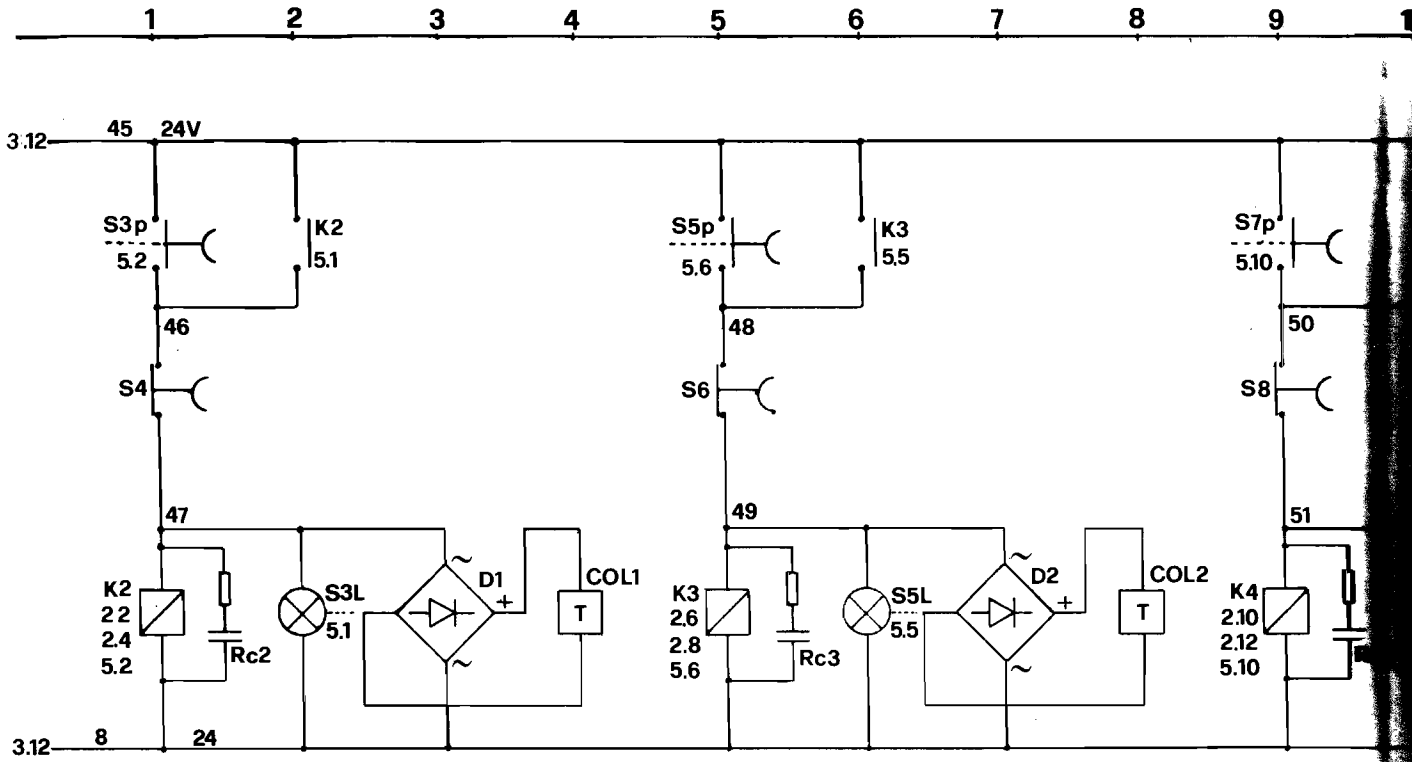
Pilot lamp

Main exhaust contactor

Thermal overload light indicator

Safety thermal sensor





1st Lamp switch ON

Diode bridge rectifier
for hour counter n° 1

Hour counter n° 1

Circuit for 2
lamps unit

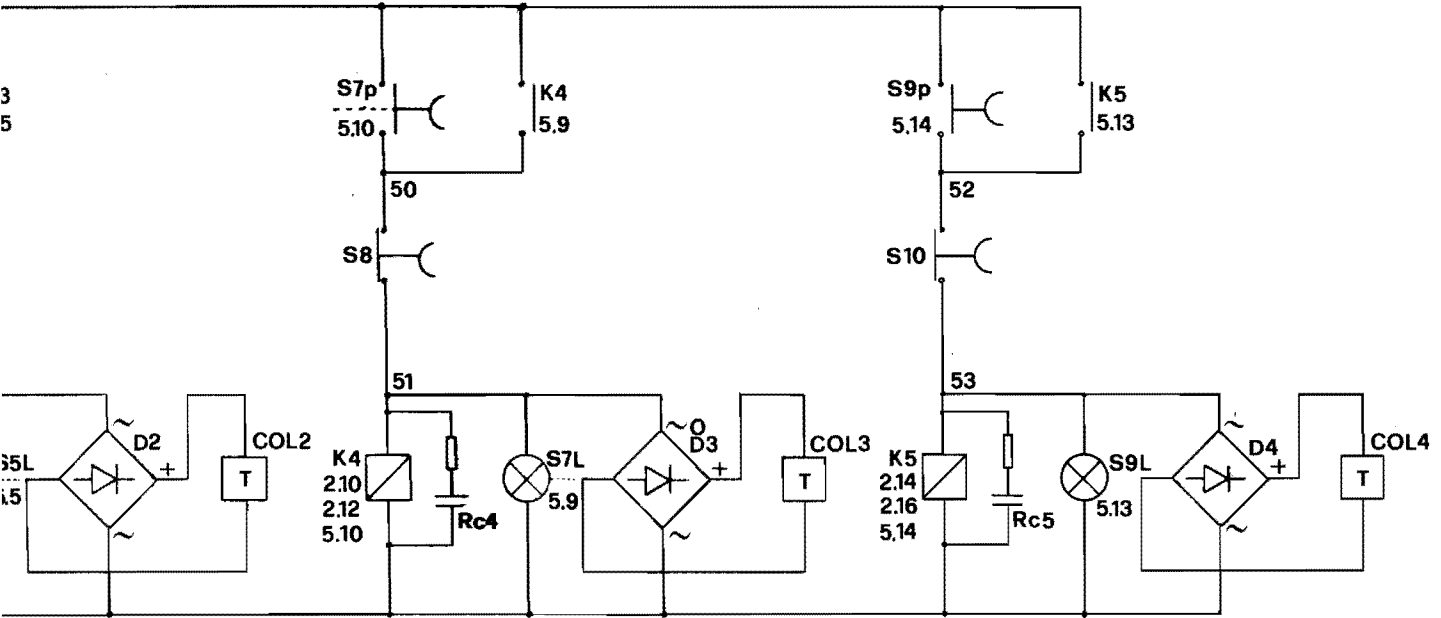
2nd Lamp switch ON

Diode bridge rectifier
four hour counter n° 2

Hour counter n° 2

3rd Lamp switch ON

Circuit for 3



Diode bridge rectifier
for hour counter n° 2

Hour counter n° 2

3rd Lamp switch ON

Circuit for 3
lamps unit

Diode bridge rectifier
for hour counter n° 3

Hour counter n° 3

4th Lamp switch ON

Circuit for 4
lamps unit

Diode bridge rectifier
for hour counter n° 4

Hour counter n° 4