

INSTRUCTIONS BOOK

PRADA NARGESA, S.L

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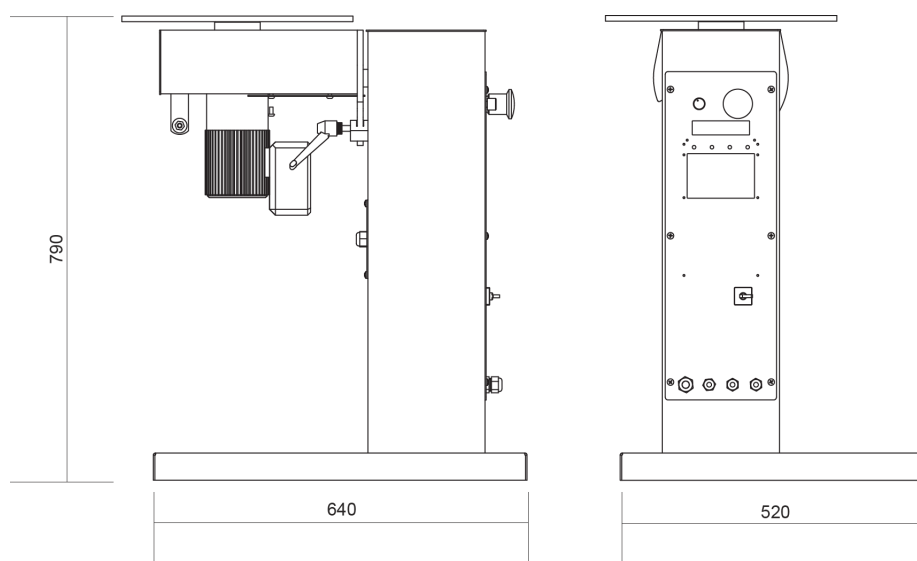
TECHNICAL ANNEX

1. CHARACTERISTICS OF THE MACHINE

1.1. Identification of the machine

Trademark	Narges
Type	Weld positioner
Model	TS10

1.2. Dimensions



Picture 1. External dimensions of the Weld positioner

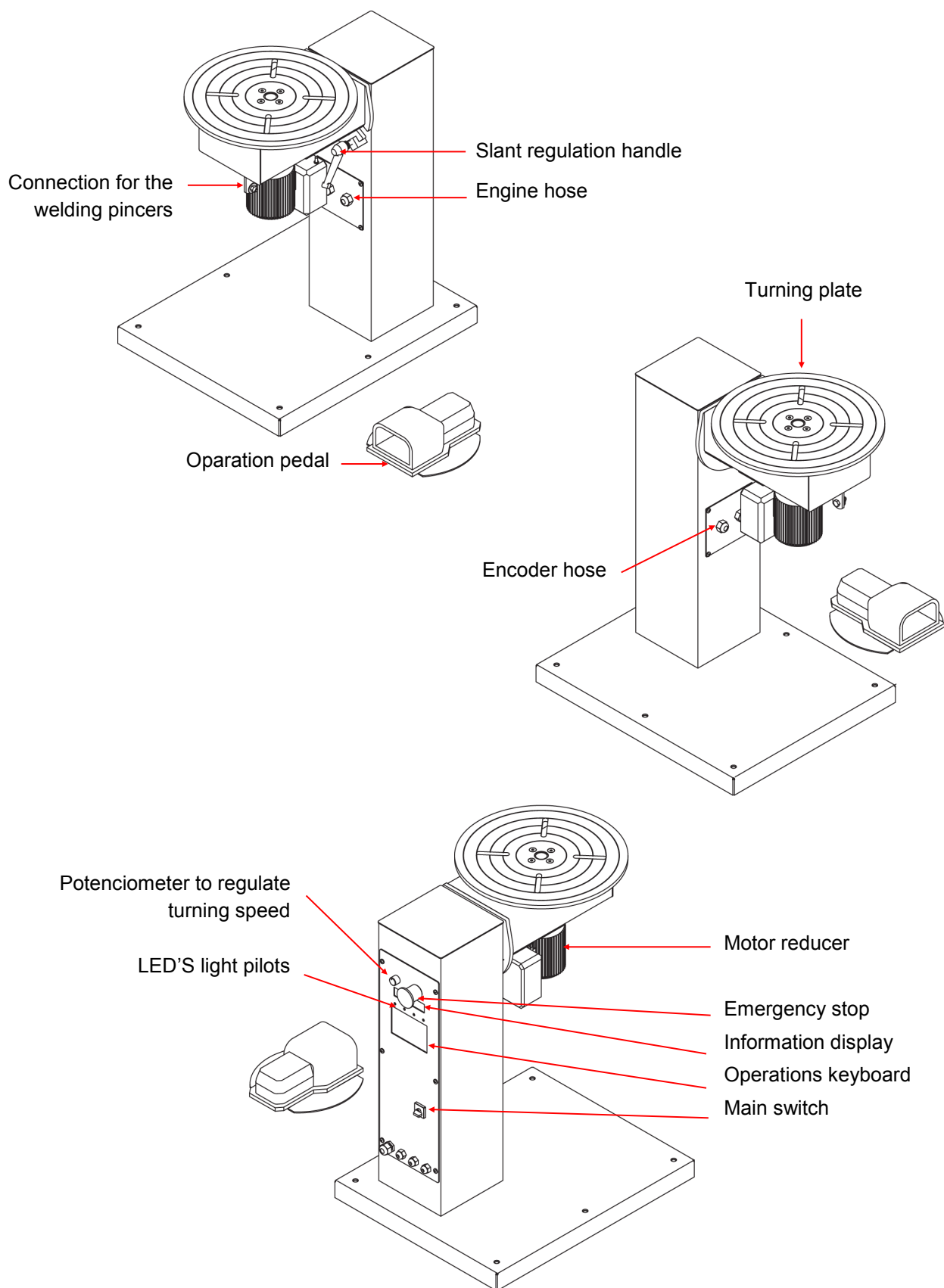
1.3. Description of the machine

TS10 has been designed to weld different circular parts in different positions and kinds of welding.

TS10, is according to the European regulations and normative for the manufacturing of machinery

If an accident occurs by negligence of the operative, for not following the safety rules exposed on this manual, PRADA NARGESA S.L will not accept any responsibility.

1.4. Identificación de los componentes



Picture 2. Nomenclature and position of components



Picture 3. Features plate

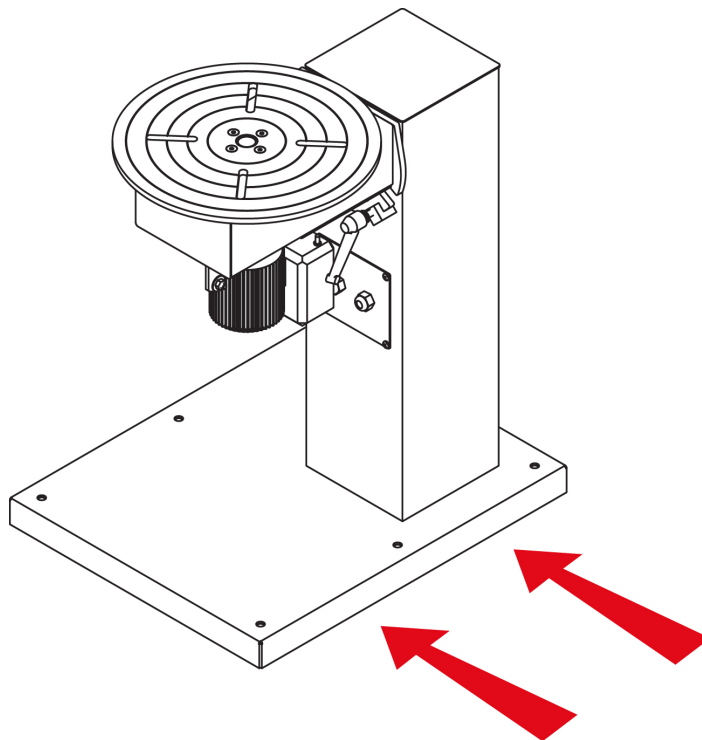
1.5. General characteristics

Motor reducer	0,12 KW / 0,16 CV
2 phased tension	230 V
Speed	60°/s
Route of the programmable bench	0° - 360°
Slant regulation	0° - 100°
Welding type	Continuous or discontinuous
Horizontal maximum capacity	75 Kg
Vertical maximum capacity	55 Kg
Round plate diameter	395 mm
Plate thickness	10 mm
Bench height	790 mm
Dimensions	520x640x790 mm
Weight	61 Kg

2. TRANSPORT AND STORAGE

2.1. Transport

Transport with no elevation will be carried out by using a forklifting truck.



Picture 4. Transportation of the machine

2.2. Storage conditions

TS 10 must be placed in a site with the following requirements:

- * Humidity between 30% and 95% without water condensation.
- * Temperature from -25 to 55°C or 75°C for length of time no longer than 24h
- * It is advisable not to pile up machines or heavy objects on top of them.
- * Do not dismantle for storage.

3. INSTALMENT AND STARTING UP

3.1 Location of the machine

The machine will be properly placed so it doesn't have to be moved, in case this is not possible then follow the steps described in the transport section (nº2). It will be put in a flat surface to avoid vibrations and movements of it during performance. It is possible to fix the machine by using bolts since it is provided with a lower base or foot with 6 holes as it is shown in the picture.

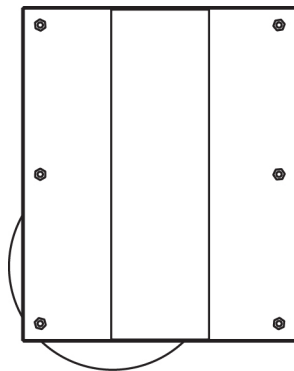


Figura 5. Puntos de anclaje de la máquina

3.2. Admissible outer conditions

- Environmental temperature between +5°C and +40°C without exceeding an average temperature of +35°C for the 24h
- Humidity from between 30% and 90% without water condensations.

3.3 Connection to the power supply

IMPORTANT: This machine must be connected to a socket with ground connection.










TS10 is equipped with a 230v and 0.12 kW single phased engine to be connected to a 230v power supply. It must be connected to an only power supply in the indicated source.

4. INSTRUCTIONS FOR USE

4.1. Panel description



Picture 6. Control panel of the Welding Positioner.

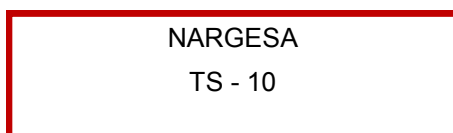
NUMERICAL FUNCTION KEYS TO INTRODUCE DATA	1 ... 9
KEY TO CONFIRM OR VALIDATE DATA	
ESCAPE KEY TO RETURN MAKE ONE STEP BACK	ESC
ARROWS TO SELECT UPWARDS DIRECTION	
ARROWS TO SELECT DOWNWARDS DIRECTION	
KEY TO ACCEDE THE CONTINUOUS WELDING MEMORIES MENU	
KEY TO ACCEDE THE DISCONTINUOUS WELDING MEMORY MENU	
KEYS FUNCTION DIN JUST FOR THE USE OF THE ROBOT	+ -
INDICATES THE TURNING DIRECTION OF THE PLATE TO THE RIGHT	
INDICATES THE TURNING DIRECTION OF THE PLATE TO THE LEFT	
IT ALLOWS THE ACCESS TO THE TIME PARAMETER OF STARTING OF THE WELDING PROCESS (WELDING STOKING TIME)	
IT ALLOWS THE ACCESS TO OVERLAPPING PARAMETER (IT SURPASSES WELDING FROM 360°)	
IT ALLOWS ACCESS TO PERFORMANCE OF THE TS-10 WITH A WELDING ROBOT	

4.2 Introduction

This book has been designed as a tool for the user of the machine Welding Positioner TS 10, since it has got important information about its use and peculiarities. Therefore it is advisable to follow step by step all points detailed in this manual for the correct comprehension of the machine performance.

4.3. Feeding of the Positioner TS10

In order to feed up the machine, just put the Start switch in the plugged position. Then it will appear a message like the one below on screen:



Picture 7. Activation message of the TS10

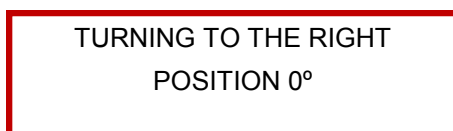
4.4. Activation of the Positioner TS10

In order to proceed properly, please, press the ESC key. Then and just in case you finish feeding up the machine, as it has been described before it will appear an initialization message in the LCD display, while the machine is getting position in "0" absolute.



Picture 8. Initialization message of TS10

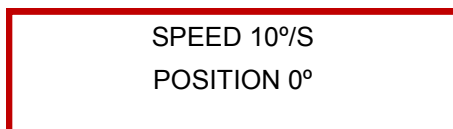
Once there, a label like the next one will show up on the screen:



Picture 9. Rest screen of TS10

This is the default mode to start the control. Now its performance is completely manual, that is to say, the welding plate turns when the pedal is pressed. When the pedal is no longer pressed the positioner stops turning.

The turning direction is previously set by pressing the key according to the desired direction. (Left or Right). If in this moment we press the pedal, the positioner starts turning in the indicated direction while it shows on screen the the speed and current angle like in the label below:

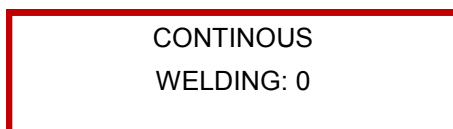


Picture 10. Information of TS10 in positioner mode

You can change the turning speed of the welding plate by adjusting the potentiometer located in the upper left part.

4.5. Memories of continuous welding

To access this menu just press the key for Continuous welding. Once you do it, it will appear on screen a list with the ten available memories. The selection of the proper memory is made by using the selection arrows (upwards and downwards) and then press OK.



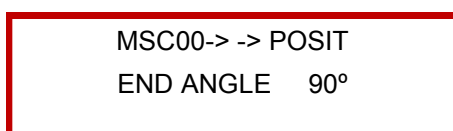
CONTINUOUS
WELDING: 0

Picture 11. Information of the current continuous welding memory.

After selecting the memory, the weld positioner will place in the starting point of this memory. At this moment either a given memory could be edited or it could go to operate with this one.

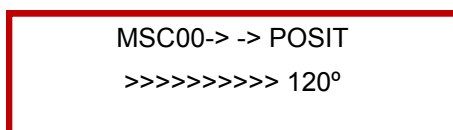
Editing will be carried out as follows:

- Changing the value of End Welding is done directly with the numeric keypad.



MSC00-> -> POSIT
END ANGLE 90°

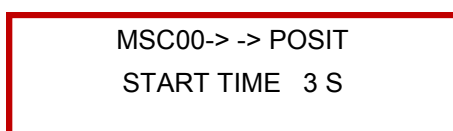
Picture 12. Screen of the continuous welding memory



MSC00-> -> POSIT
>>>>>>>> 120°

Picture 13. Screen for the modification of the continuous welding memory

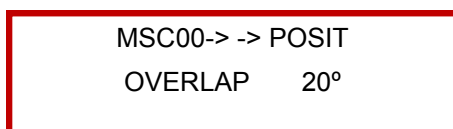
- The Starting Time key gives direct access to the parameter of this memory.



MSC00-> -> POSIT
START TIME 3 S

Picture 14. Screen for Welding Starting Time

- The Overlapping key gives direct access to the parameter of this memory whenever the memory is 360°.



MSC00-> -> POSIT
OVERLAP 20°

Picture 15. Overlapping angle screen

· The Left or Right turning direction keys determine the welding plate turning direction since they both work with the same current memory.



MSC00-> -> POSIT
END ANGLE 90°

Picture 16. Screen for Right turning direction



MSC00 <- <- POSIT
END ANGLE 90°

Picture 17. Screen for left turning direction

The operation with a given memory is carried out as follows, after placing the piece in the plate:
The welding starts, following the parameters of it and in the specified.



DESTINATION 360°
CURRENT 0°

Picture 18. Screen for Continuous welding memory

· Once the welding sequence is finished, the weld positioner will go back again to the Welding Starting Point.

4.6. Memories of discontinuous welding

For circular welding allowing to make points or just sections of welding.

It accede the discontinuous welding memories pressing the key for discontinuous welding. Once you do this, a list with the 10 existing discontinuous memories will show up on screen. The selection has been made by using the moving keys (up and down arrows) and pressing the OK key.

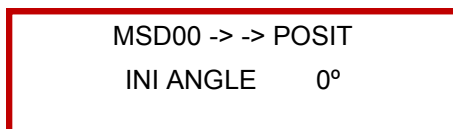


DISCONTINUOUS: 00
WELDING

Picture 19. Information of the current discontinuous welding memorys

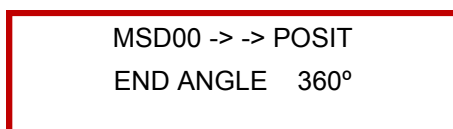
Now the following parameters will show up:

- Indication of the start and end of welding (in degrees).



MSD00 -> -> POSIT
INI ANGLE 0°

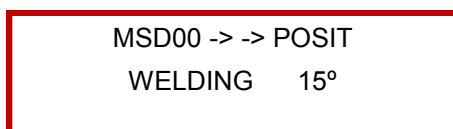
Picture 20. Screen for discontinuous welding memory



MSD00 -> -> POSIT
END ANGLE 360°

Picture 21. Screen of Discontinuous welding memory

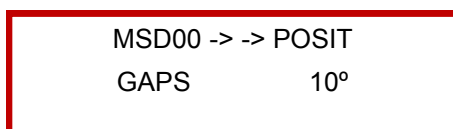
- Length of welding



MSD00 -> -> POSIT
WELDING 15°

Picture 22. Screen of the discontinuous welding memory

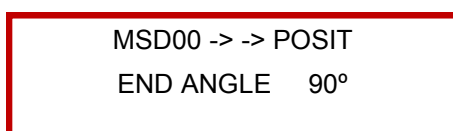
- Gap between welding



MSD00 -> -> POSIT
GAPS 10°

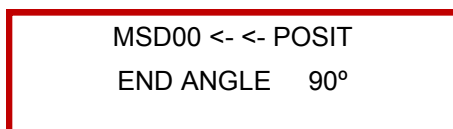
Picture 23. Screen for the discontinuous welding memory

For the turning direction parameters, starting time and overlapping, the access is made directly through the function keys that are already set for that.



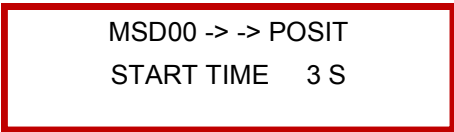
MSD00 -> -> POSIT
END ANGLE 90°

Picture 24. Screen for the Right turning dire



MSD00 <- <- POSIT
END ANGLE 90°

Picture 25. Screen for the Left turning direction



MSD00 -> -> POSIT
START TIME 3 S

Picture 26. Screen for Starting time of welding



MSD00 -> -> POSIT
OVERLAP 20°

Picture 27. Screen for Overlapping angle

When pressing the pedal and let it loose then after having introduced the piece, the indicated welding cycle starts.



DESTINATION 360°
CURRENT 0°

Picture 28. Screen for the discontinuous welding memory

When a welding operation ends, the plate will go again to the starting point of the memory currently selected.

4.7. Robot mode

When pressing the Robot Key we are indicating that the positioner will work with an outer welding robot. In this case, the manual performance is cancelled. However the discontinuous and continuous welding memories keep on performing exactly like in the Positioner Mode.

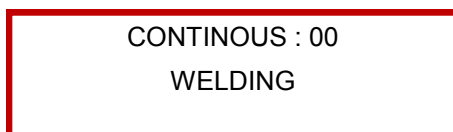
The only difference lies on how the Positioner operates, which is explained below.

- The positioner will go to absolute "0" or to the beginning of the memory to be made.
- When pressing the pedal and let it loose again the welding cycle begins. The relay activates for the robot to be placed in the starting point, make the linear welding and gives us the sign as it is in position to start the rotary welding.
- Once it is detected that the robot is in that position, the second relay is used to indicate the moment required for the robot to carry out the welding operation or not.
- When the welding is finished, the starting relay is cancelled so the robot goes to the rest position.
- The positioner will go back again in absolute "0" or Starting welding point.

Note: Remember all signs coming from the Robot must be Potential free.
Parameters start time and overlap also works in robot mode.

4.8. Memories of continuous welding at robot mode

To accede this menu it is necessary to press the Continuous Welding key. Once it is made is appears on screen a list with the ten available memories. The selection of the proper memory will be carried out with the selection arrows. (Up and down arrows) and the pressing of the OK key.

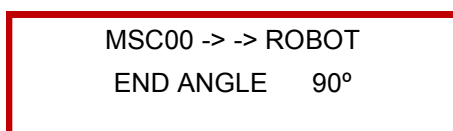


Picture 29. Information of the current continuous welding memory

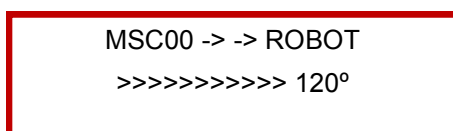
After selecting the memory, the positioner will go to the starting point of that memory, then a given memory could be edited or it could go to work with this one.

Edition will be carried out as follows:

- Changing the value of End Welding is done directly with the numeric keypad.

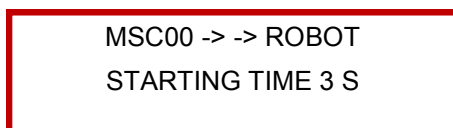


Picture 30. Screen for the continuous memory welding



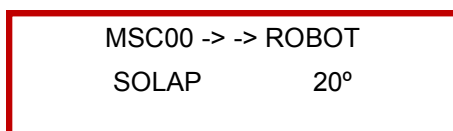
Picture 31. Screen for the modification of the continuous welding memory

- The Starting Time Key gives direct access to to the parameter of this memory



Picture 32. Screen for Welding starting point

- The Overlapping key gives direct access to this parameter on the memory whenever it is 360°.



Picture 33. Screen for the Overlapping Angle

- The Right or Left turning direction arrows determine the welding plate turning direction when working with the current memory.

MSC -> -> ROBOT
END ANGLE 90°

Picture 34. Screen for right turning direction

MSC <- <- ROBOT
END ANGLE 90°

Picture 35. Screen for Left turning direction

The operation with a given memory is carried out as follows, after placing the piece in the plate:

- The welding starts following the parameters of this with the specified sense.

DESTINATION 360°
CURRENT 0°

Picture 36. Screen of the continuous welding memory

- Once the welding sequence is finished, the positioner goes back again to the Welding Starting Point.

4.9. Memories of discontinuous welding at robot mode

To accede to the discontinuous welding memories just press the Discontinuous welding keys It will appear then a list with the ten existing discontinuous memories. The selection will be made by using the moving keys. (Up and down arrows) and pressing the OK key.

DISCONTINUOUS : 00
WELDING

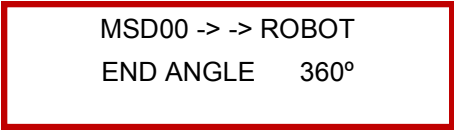
Picture 37. Information of the current discontinuous memory

Now the following parameters will appear.

- Indication of the start and end of the welding. (In degrees)

MSD00 -> -> ROBOT
START ANG 0°

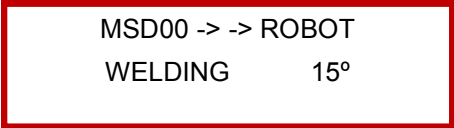
Picture 38. Screen of the discontinuous welding memory



MSD00 -> -> ROBOT
END ANGLE 360°

Picture 39. Screen of the discontinuous welding memory

· Welding length.



MSD00 -> -> ROBOT
WELDING 15°

Picture 40. Screen of the discontinuous welding memory

· Gap between welding.



MSD00 -> -> ROBOT
DISTANCE 10°

Picture 41. Screen of the discontinuous welding memory

To accede the turning direction parameters, starting time and overlapping go through the function keys that are already set for that.



MSD00 -> -> ROBOT
END ANGLE 90°

Picture 42. Screen of the right turning direction



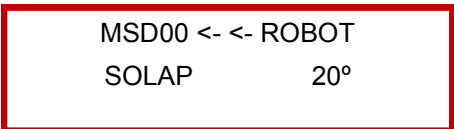
MSD00 <- <- ROBOT
END ANGLE 90°

Picture 43. Screen of Left turning direction



MSD00 <- <- ROBOT
STARTING TIME 3 S

Picture 44. Screen of Welding Start Time



MSD00 <- <- ROBOT
SOLAP 20°

Picture 45. Screen of Overlapping angle

When pressing the pedal and then let it loose, after having introduced the piece to be worked, the indicated welding cycle begins.

DESTINATION	360°
CURRENT	0°

Picture 46. Screen of Pantalla de Memoria de soldadura discontinua

When a welding operation ends, the plate locates in a new starting point of the memory that has been currently selected.

5. WARNINGS

- Do not handle any component of the machine while this one is performing.
- Do not use the machine for any other purpose but the ones described in this manual.
- Wear safety goggles and boots according to the EC regulations.
- Keep a safety distance between the machine and the operative during the time the machine is performing.
- In case an accident due to a negligent use of the operative, for not bearing in mind the safety rules exposed on this book, NARGESA SL will not accept any responsibility.

Technical annex

Weld Positioner TS10

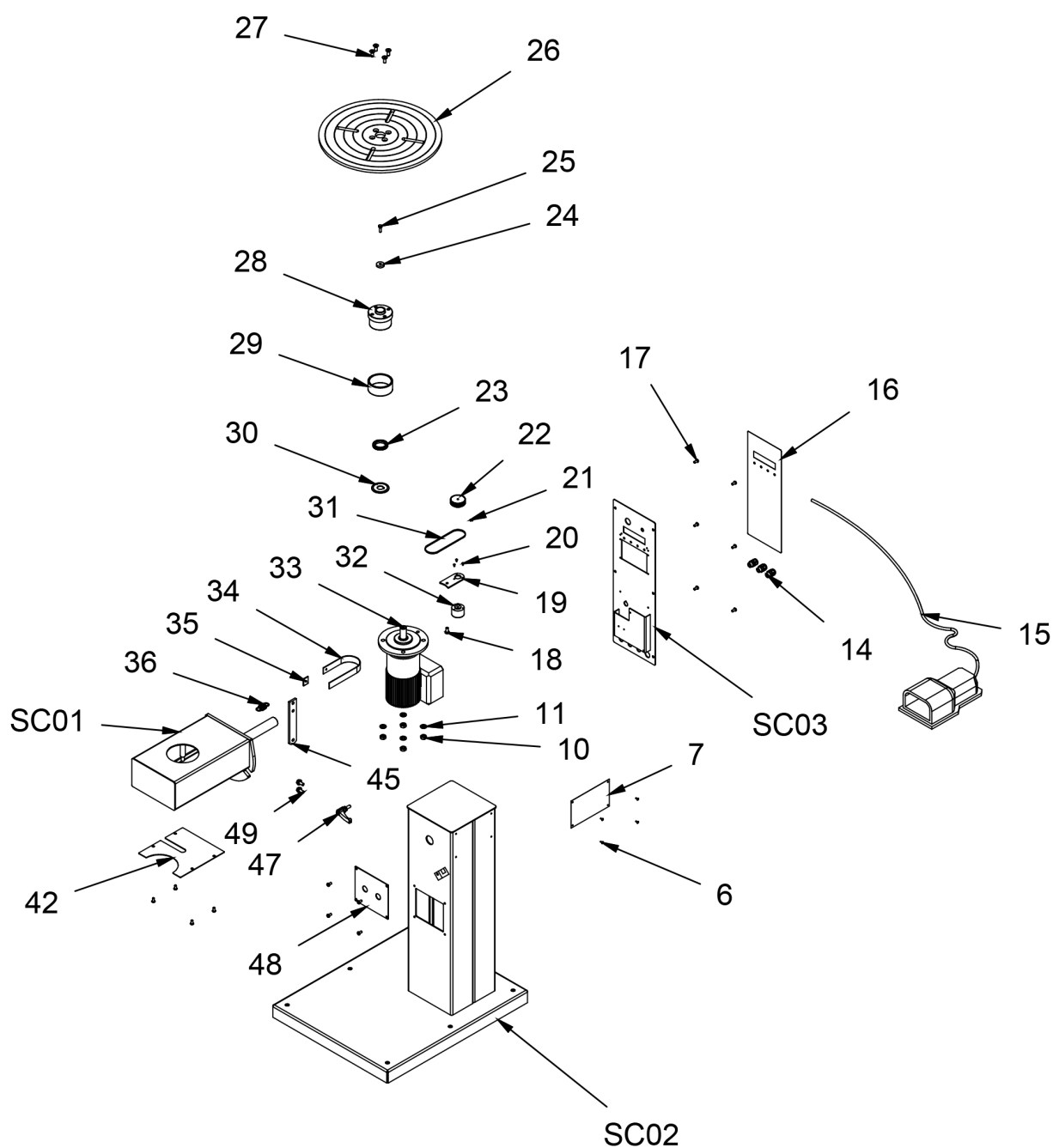
List of parts

Electrical map

Electric box connections

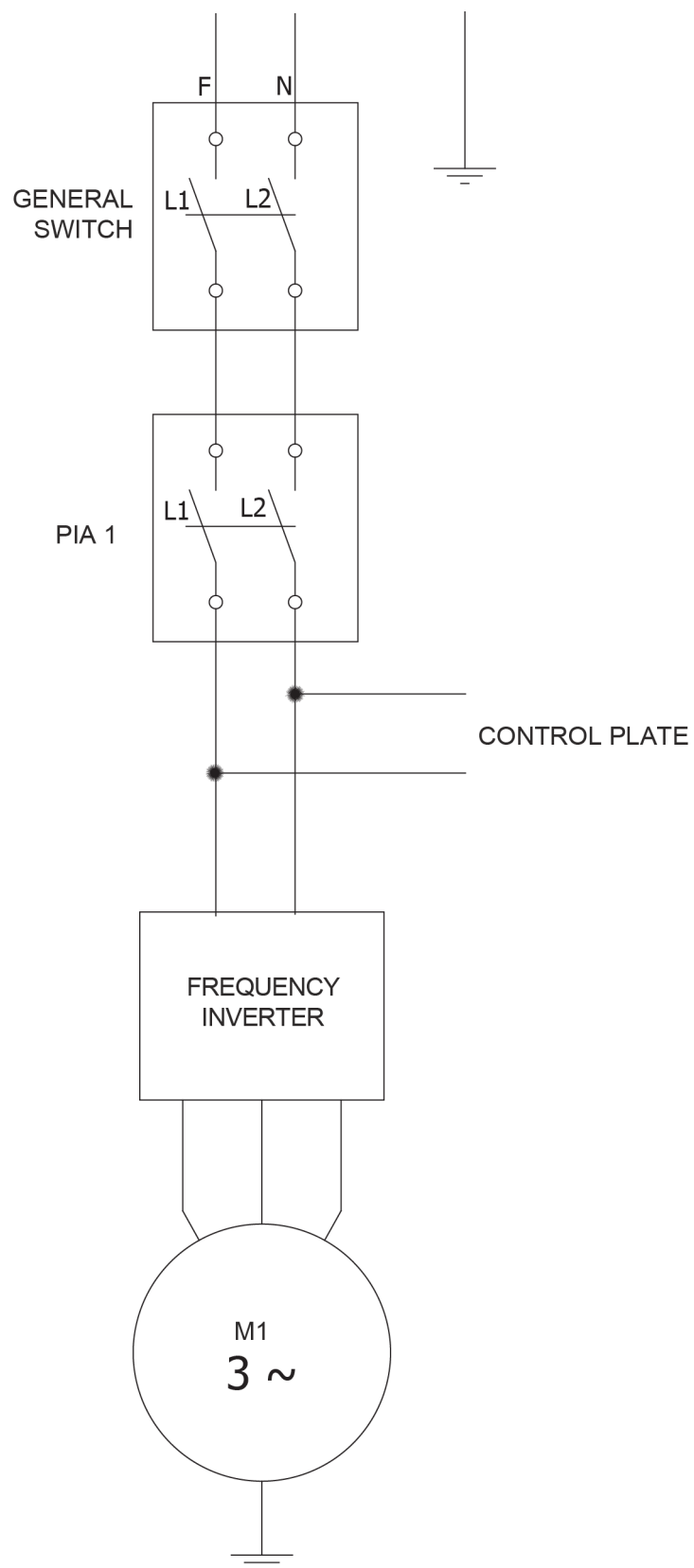
Electronic plate

A1. List of parts

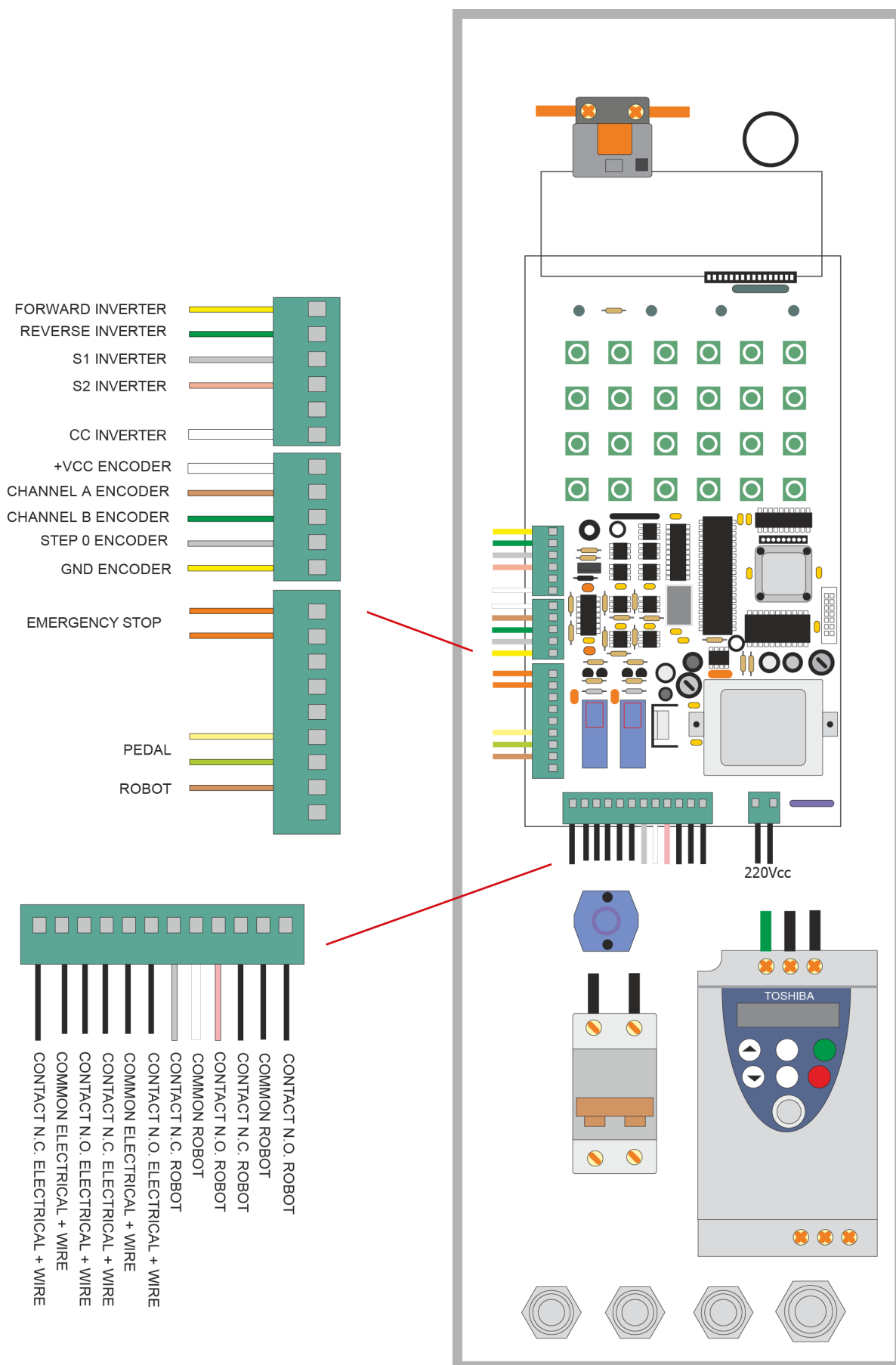


Elemento	Nº de pieza	CTDAD	Descripción
SC01	130-03-01-00SC1	1	CONJUNTO SOPORTE MOTOR TS10
SC02	130-03-01-00SC2	1	CONJUNTO ESTRUCTURA TS10
SC03	130-03-01-00SC3	1	CONJUNTO SOPORTE INSTALACION TS10
6	020-D7337-3X8	4	Remache De Clavo DIN 7337 De Al Ø3x8
7	122-PLC-0000-001	1	Placa Características General
10	020-D934-M10	4	TUERCA DIN 934 M10
11	020-D125B-M10	4	ARANDELA DIN 125 B M10
14	050-PE-00002	3	Prensaestopa PG9
15	050-PED-003	1	Pedal Simple
16	122-CAL-0301-00001	1	CALCA TS10
17	020-I7380-M6X12	14	TORNILLO ALLEN CABEZA REDONDA ISO 7380 M6X12
18	020-I7380-M8X16	1	TORNILLO ALLEN ISO 7380 M8X16
19	120-03-01-00037	1	SOPORTE ENCODER TS10
20	020-I7380-M3X6	3	TORNILLO ISO 7380 M3X6
21	020-D913-M5X8	1	Esparrago Allen DIN 913 M5X8
22	120-03-01-00039	1	POLEA ENCODER TS10
23	120-03-01-00030	1	POLEA BUJE TS10
24	120-03-01-00004	1	ARANDELA FIJACION MOTOR TS10
25	020-D933-M6X20	1	TORNILLO HEXAGONAL DIN 933 M6X20
26	120-03-01-00002	1	PLATO GIRATORIO TS10
27	020-D7991-M8X20	4	Tornillo Allen DIN 7991 M8X20
28	120-03-01-00005	1	ACOPLAMIENTO MOTOR PLATO TS10
29	120-03-01-00006	1	CASQUILLO BRONCE TS10
30	120-03-01-00031	1	ARANDELA POLEA MOTOR TS10
31	030-CD-00003	1	Correa Dentada Poliuretano T2.5 / 4 Ancho / L380
32	050-ENC-00002	1	ENCODER POSICION
33	050-MER-00005	1	Motor Reductor Cnvm012-6070Dae-143/G V63S/4 motor de 0.12 Kw a 1390 rpm
34	120-03-01-00018	1	TRENZA DE COBRE MASA TS10
35	120-03-01-00019	1	TUBO ESCOBILLA TS10
36	120-03-01-00021	1	MUELLE TS10
42	120-03-01-00017	1	TAPA ENVOLVENTE MOTOR TS10
45	120-03-01-00025	1	PASAMANO COBRE TS10
47	031-MAG-00005	1	Empuñadura Graduable Macho M8X20 Negra con Boton Naranja
48	120-03-01-00042	1	TAPA PRENSAESTOPAS TS10
49	020-D6921-M8x16	2	TORNILLO HEXAGONAL DIN 6921 M8x16

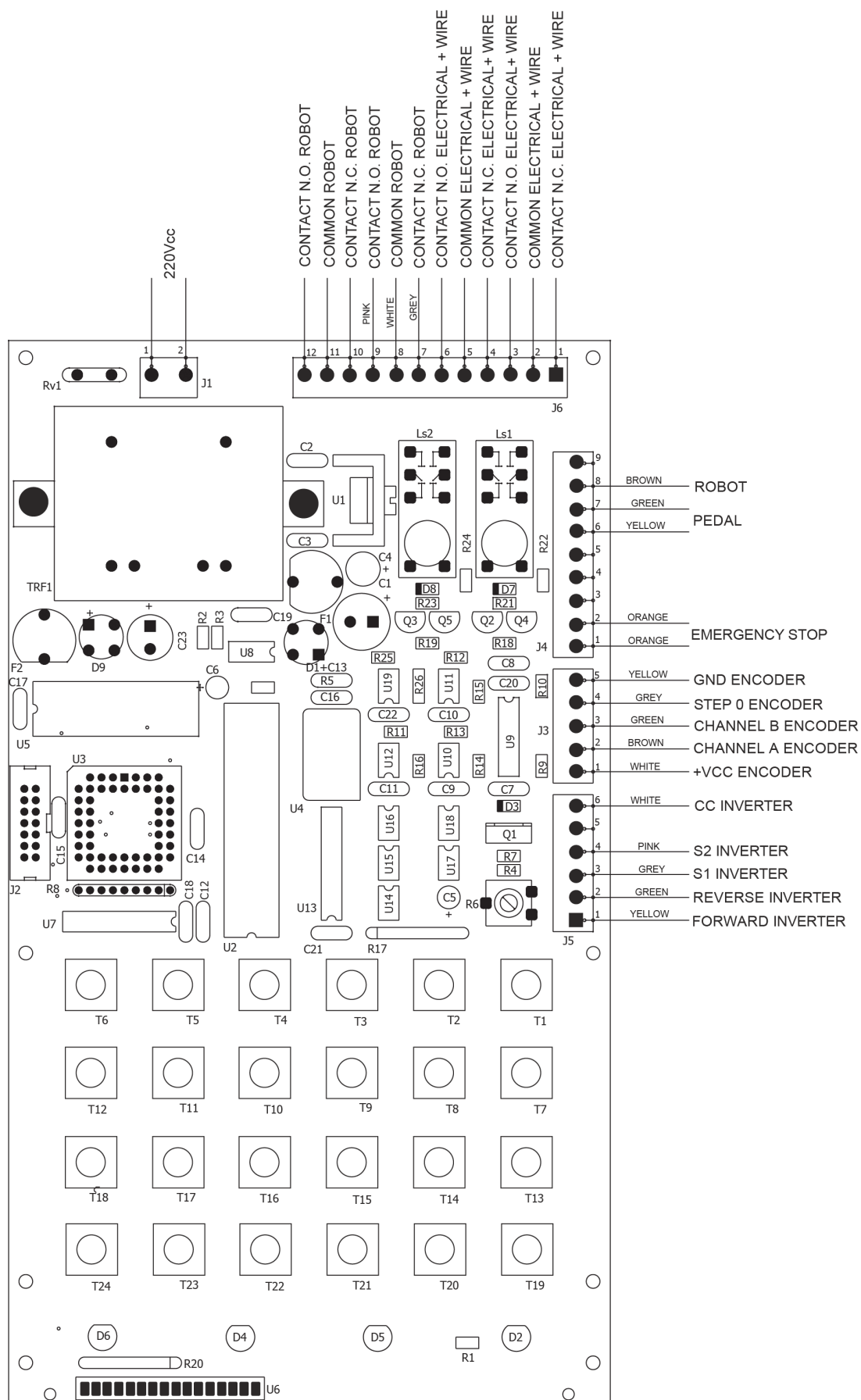
A2. Electrical map



A3. Electric box connections

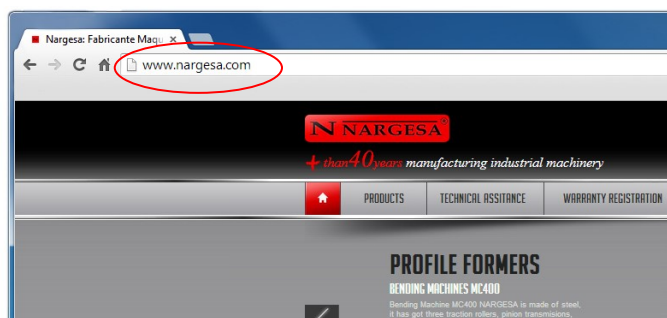


A4. Electronic plate

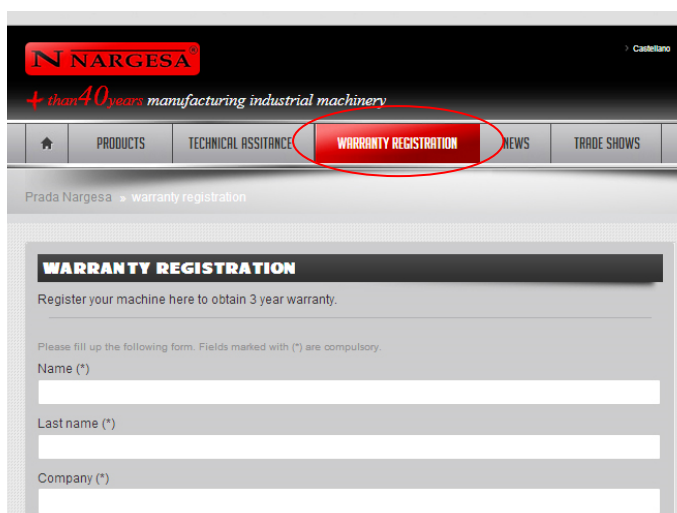


WARRANTY REGISTRATION

1. Among www.nargesa.com on our site



2. Select the menu **Warranty Registration**



3. Complete the form with your details and press **Send**



4. The window **Message Sent** confirms your data has been successfully sent to Prada Nargesa SL. Your machine has been registered and has a warranty of three years in total.

