meler

GLUING SOLUTIONS



INSTRUCTIONS
MANUAL

ADHESIVE MELTER **MICRON MOD**

MA-5094-E 010915



Published by:

Meler Gluing Solutions, S.A

P.I. Los Agustinos, calle G, nave D-43
E - 31160 ORCOYEN Navarra (España)
Tel.: + 34 948 351 110
Fax: + 34 948 351 130
e-mail: info@meler.eu

www.meler.eu

Edition September 2015

© Copyright by Meler

All rights reserved. Its reproduction, diffusion or use by electronic or other means of all or any part of this document without the express authorization of its owner is strictly prohibited.

The specifications and information contained in this manual may be modified without prior notice.

TABLE OF CONTENTS

1. SAFETY GUIDELINES 1-1

General 1-1
Symbols 1-1
Mechanical components 1-2
Electrical components 1-2
Hydraulic components 1-2
Thermal components 1-2
Noise 1-3
Materials 1-3

2. INTRODUCTION 2-1

Description 2-2
Intended use 2-2
Limited use 2-2
Modes of operation 2-3
Hot-melt melter identification 2-3
Main components 2-4
Control card components 2-5
Optional equipment 2-6
Low-level warning light option 2-6
Automatic control option 2-6
Accessories 2-6

3. INSTALLATION 3-1

Introduction 3-1
Installation requirements 3-1
Electrical Consumption 3-2
Compressed air 3-2

Other factors 3-2
Unpacking 3-3
Contents 3-3
Mounting the equipment 3-3
Electrical power connection 3-3
Pneumatic connection 3-4
Autoloader pneumatic connection 3-5
Suction tube connection 3-5
Connecting control detectors 3-6
Placing the suction tube 3-6
Hose and applicator connection 3-6
Parameter Programming 3-7
Programming working temperatures 3-7
Selecting the overheating value 3-8
Keeping a component on display 3-8
External I/O connections 3-9
Temperature ok 3-9
Output disabled 3-10
4. MELTER OPERATION 4-1
General information 4-1
Filling the adhesive 4-2
Starting up the melter equipment 4-2
Melter equipment displays 4-3
Displaying the temperature for each component 4-4
Alarm displays 4-4
Operational pressure display and adjustment 4-5
Temperature adjustment 4-6
Programming the applicator parameters 4-6
Setting the clock 4-8
Programming the current day and hour 4-8

Programming equipment activation/deactivation 4-9

Disabling the equipment activation/deactivation program 4-10

Programming the equipment's standby function activation/deactivation 4-10

Disabling the equipment standby function programming 4-11

Special function buttons 4-12

Start up and operation of the loader 4-13

Loader standby function 4-14

Single-colour or two-colour warning light 4-14

Level sensor adjustments 4-15

Sensitivity adjustment 4-15

Level stabilisation time 4-15

Programmable times using the timer 4-15

Disconnection delay time 4-15

Operating alarms 4-15

Change to standby time 4-16

Setting programmable times using the timer 4-16

Thermostat operation 4-17

Turning off the melter equipment 4-17

5. MAINTENANCE 5-1

Equipment cleaning 5-1

System depressurisation 5-2

Access to pneumatic unit 5-3

Pneumatic circuit 5-3

Pump filter maintenance 5-3

Cleaning the melter grid 5-4

Cleaning burnt adhesive 5-4

Safety Thermostat 5-5

Control of the load sensor 5-5

Inspection of the aspiration hose 5-6

Automatic feeder filter maintenance 5-6

Control of pneumatic vibrator 5-6
Remove the equipment from its base 5-6

6. TROUBLESHOOTING 6-1

Melter 6-2
The unit does not turn on 6-2
Equipment shortcircuit malfunction 6-2
The equipment does not automatically go into standby 6-3
The equipment does not come out of standby into heating 6-3
The equipment does not load adhesive 6-3
Melter grid 6-4
The melter grid does not heat 6-4
The melter grid does not stop heating 6-4
Temperature fluctuations in the melter grid 6-5
Manifold 6-5
The manifold does not heat 6-5
The manifold does not stop heating 6-5
Temperature fluctuations in the manifold 6-6
Pump 6-6
The pump does not pump 6-6
Pneumatic unit 6-6
Pneumatic unit malfunction 6-6
Adhesive leaks 6-7
Hose 6-8
Hose does not heat 6-8
Hose does not stop heating 6-8
Temperature fluctuations in hose 6-8
Gun 6-9
Gun does not heat 6-9
Gun does not stop heating 6-9
Temperature fluctuations in gun 6-9

7. TECHNICAL CHARACTERISTICS 7-1

Generals 7-1

Dimensions 7-2

Mounting the equipment 7-2

Options 7-2

Warning light option 7-2

VP option 7-2

8. ELECTRICAL DRAWINGS 8-1

9. PNEUMATIC DIAGRAM 9-1

Electro-pneumatic diagram for automatic feeder system 9-1

Component list 9-1

Pneumatic connection for 7 cm^3/stroke PUMP 9-2

Components list 9-2

Pneumatic diagram for 7 cm^3/stroke PUMP 9-3

Electro-pneumatic connection with pressure regulator VP. 7 cm^3/stroke PUMP 9-4

Components list 9-4

Electro-pneumatic diagram with pressure regulator VP. 7 cm^3/stroke PUMP 9-5

10. SPARE PARTS LIST 10-1

A. TANK ASSEMBLY 10-4

B. DISTRIBUTOR UNIT 10-5

C. PUMP ASSEMBLY 10-6

D. PNEUMATIC UNIT ASSEMBLY 7cc 10-7

E. CHASSIS ASSEMBLY 10-8

F. SUCTION TUBE AND VALVE ASSEMBLY 10-9

F. ELECTRIC/ ELECTRONIC ASSEMBLY 10-10

F. ELECTRIC/ ELECTRONIC ASSEMBLY 10-11

H. WARNING LIGHT AND VP-200 (OPTIONS) 10-12

This page is intentionally left blank.

1. SAFETY GUIDELINES

General

The information contained in this section applies not only to everyday machine operation, but also to any procedure carried out on it, whether for preventive maintenance or in the case of repairs and the replacement of worn out parts.

It is very important to observe the safety warnings in this manual at all times. Failure to do so may result in personal injury and/or damage to the machine or the rest of the installation.

Before beginning work on the machine, read this manual carefully, and in case of any doubt, contact our Technical Service Center. We are available for any clarification that you might need.

Keep manuals in perfect condition and within reach of personnel that use the machine and perform maintenance on it.

Also provide necessary safety material: appropriate clothing, footwear, gloves and safety glasses.

In all cases, observe local regulations regarding risk prevention and safety.

Symbols

The symbols used on both the melter/applicator equipment and in this manual always represent the type of risk we are exposed to. Failure to abide by a warning signal may result in personal injury and/or damage to the machine or the rest of the installation.

Warning: Risk of electrical shock. Carelessness may produce injury or death.



Warning: Hot zone with high temperatures. Risk of burns. Use thermal protective equipment.



Warning: System under pressure. Risk of burns or particle projection. Use thermal protective equipment and goggles.



Warning: Important information for the correct use of the system. May include one or several of the previous hazards, and therefore must be kept in mind to avoid damage and injury.



Mechanical components

The melter/applicator equipment installation uses moveable parts that may cause damage or injury. Use the equipment correctly, and do not remove the safety guards while the equipment is in operation; prevent the risk of possible entrapment due to moving mechanical parts.

Do not use the machine if the safety devices are not in place or appear to be inadequately installed.

For maintenance or repair operations, stop the movement of moveable parts by turning off the main switch.

Electrical components

The system operates with a one-phase current (LN ~ 230V 50Hz + PE or 3N ~ 400/230V 50Hz+PE) at a certain rated power. Never handle the equipment with the power connected, as this may result in powerful electrical shocks.

The installation must be correctly grounded.

The installation's power cable conductors must match the required electric current and voltage.

Periodically inspect the cables to check for crushing, wear and tear, as well as to prevent tripping and falls as a result of their placement.

Although the system meets EMC requirements, it is inadvisable to use devices that transmit high levels of radiation, i.e., mobile phones or soldering equipment in their vecinity.

Hydraulic components

As this is a pressurized system, precautions related to this type of equipment must be observed.

Before each operation, always make sure that the adhesive circuit is completely free of pressure. There is a high risk of hot particle projection, along with the corresponding danger of burns.

Use caution with the residual pressure that may remain in the hoses when the adhesive cools. When reheated, there is a risk of hot particle projection if the outputs are left open.

Thermal components

The entire system operates with temperatures reaching up to 200 °C (446 °F). The equipment must be operated using adequate protection (clothing, footwear, gloves and protective glasses) that completely cover exposed parts of the body.

Keep in mind that, due to the high temperatures reached, the heat does not dissipate immediately, even when the power (in this case, electric) source is disconnected. Therefore, use caution, even with the adhesive itself. It may remain very hot, even in a solid state.

In case of burns, immediately cool the affected area with clean, cold water. Seek medical attention as soon as possible from the company's medical service or the nearest hospital. Do not try to remove the adhesive material from the skin.

Noise

The noise levels of the automatic feeder system is approximately 95 db, while the automatic feeder is not working, the noise levels are below acceptable levels, however, for operator safety we recommend working with individual hearing protection.

Materials

Meler systems are designed for use with hot-melt adhesives. They should not be used with any other type of material, and especially not with solvents, which may cause personal injury or damage to internal system components.

Always use original Meler' components and replacement parts, which guarantee the correct system operation and service.

When using adhesive, follow the corresponding guidelines found in the Technical and Safety Sheets provided by the manufacturer. Pay special attention to the advised work temperatures in order to prevent adhesive burning and degradation.

Ventilate the work area adequately in order to remove the vapors produced. Avoid the prolonged inhalation of these vapors.

This page is intentionally left blank.

2. INTRODUCTION

In this manual you will find information about the installation, use and maintenance of the hot-melt adhesive melter in Meler's Micron MOD.

This equipment is designed for applications with low-to-medium consumption and on-demand adhesive melting.

One advantage of this equipment is its energy efficiency, as it uses electrical energy to melt the adhesive and minimises energy losses to the outside thanks to its improved insulation. Moreover, because it is a melt-on-demand system, less energy is consumed during system start-up.

The equipment has an automatic pellet feeder that continuously supplies adhesive to the equipment based on the application requirements, so that only the adhesive that will be used is melted. The remaining adhesive is stored in the original container at room temperature.

Each time the melter grid sensor detects a low adhesive level it sends a signal to the suction system which load the adhesive directly from the adhesive bag to the melter grid. The loading process is indicated by a light signal.

When the sensor detects the correct level again, the transfer of adhesive stops (a disconnection delay can be programmed). An alarm system, timed from the detection of low level, warns of possible flaws in the loading or completely emptying the container for its replenishment.

The system activates a combined signal, noise and intermittent light. The acoustic signal can be cancelled by the available button.

Once the alarm is corrected, the light signal turns off and the equipment is restarted pushing the button 'RESET'.



This instantaneous melting system guarantees optimum treatment of the adhesive and prevents carbonisation and nozzle clogging, doing away with the need for periodic cleaning.

The sealed loading system ensures there are no contaminating substances in the adhesive circuit.

Description

The Micron MOD melters are designed for use with Meler hoses and applicators in hot-melt adhesive applications. Their different variations – line, coating or swirl-spray – cover a wide range of applications, being very versatile in all markets where they are used.

Intended use

The hot-melt melters Micron MOD are designed to be used in the following conditions:

- Hot-melt adhesive fusion and pumping at temperatures up to 200°C (392°F).
- Use of hot-melt melters with Meler accessories.
- Installation of hot-melt melters according to the security regulations currently in force and the instructions provided in this manual (anchoring, electrical connection, hydraulic connection, etc).
- Use of hot-melt melters in non-explosive, non-chemically aggressive environments.
- Use of hot-melt melters following the safety instructions indicated in this manual, as well as on the labels accompanying the equipment, using adequate means of protection during each mode of operation.

Limited use

The Micron MOD hot-melt melters must be used for their intended uses and never in the following conditions:

- Use with reactive polyurethane- or polyamide-based adhesives or any other material that might cause safety or health risks when heated.
- Use of hot-melt melters/applicators in environments where cleaning is necessary using water jets.
- Use of hot-melt melters/applicators to heat or melt food products.
- Use or operation without adequate safety protection.
- Do not us it to transfer liquids or materials others than those specified. Some adhesives can become sticky with moisture, causing a malfunction of the device.

Modes of operation

The Micron MOD hot-melt melters may be used in all of the following modes:

Work mode_ The hot-melt melter keeps materials hot at the pre-selected temperature indicated on the display. The pump is kept activated, waiting for the consumption command when one or more application applicators are activated. The device operates normally, loading the melter grid of the hot-melt system as often as low level the detector of the loading system, installed on the melter grid, indicates it. This corresponds to an automatic process where the operator should not act on any element of control.

Standby mode_ The hot-melt melter remains in a resting state, with the materials kept at (programmable) temperature values below the pre-selected value. The pump remains deactivated.

Alarm mode_ The hot-melt melter/applicator detects a malfunction and warns the operator of this event. The pump remains deactivated. The device stops the function of load, stopping the expulsion of air, in case the tube is obstructed or lack of adhesive in the adhesive container. In this situation a light and an acoustic signal is emitted, which can be overturned by the operator. After the intervention to replenish the system, the operator must push the reset button. The pump remains deactivated.

Stop mode_ The hot-melt melter remains off, without heating the materials and with the pump deactivated. The electrical and pneumatic supply remains activated between the network and the system.

Hot-melt melter identification

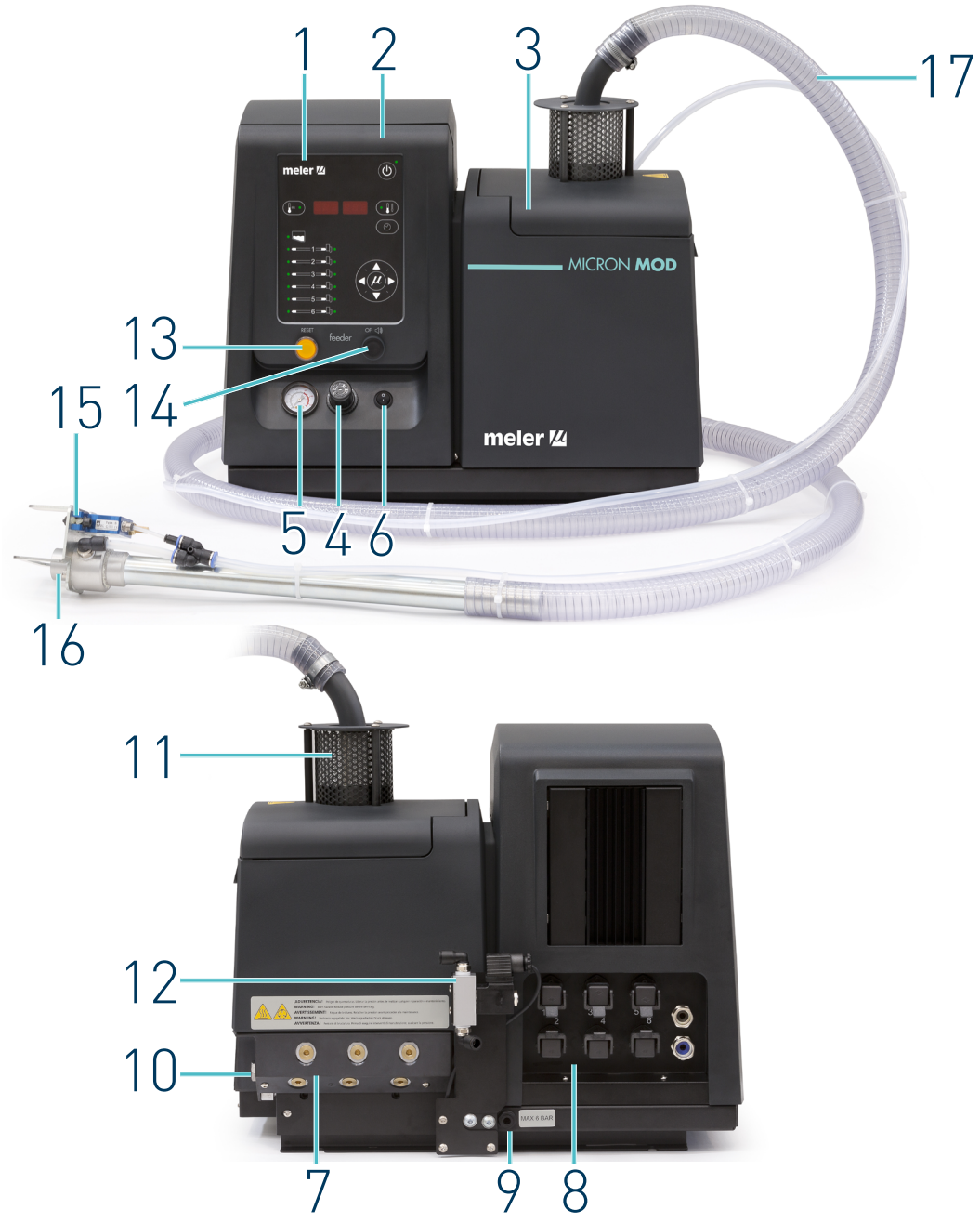
When placing orders for replacement parts or requesting help from our service center, you should know the model and reference number of your hot-melt melter.

These data and other information of a technical nature can be located on the identification plate located in the side part of the electrical cabinet.



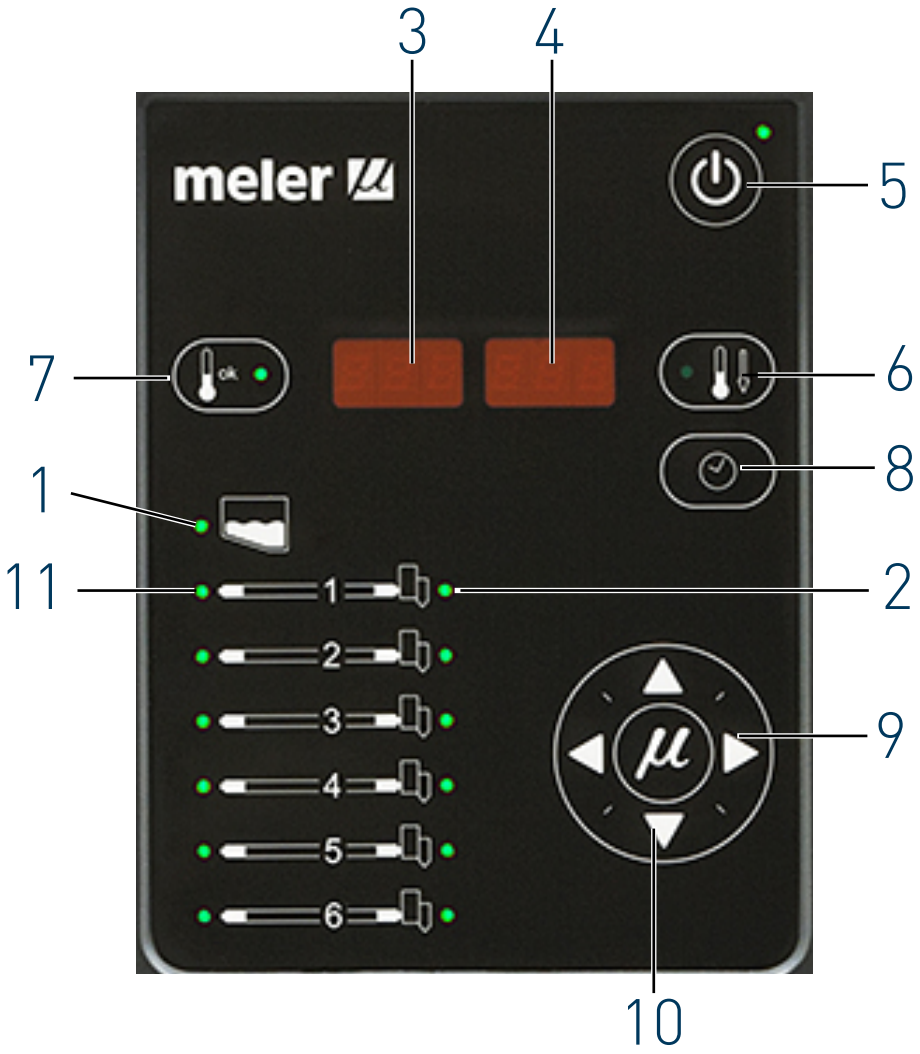
Main components

1. Front control card
2. Access door to the electric/pneumatic area
3. Melter grid access lid to the reserve adhesive
4. Pump air pressure regulator
5. Air pressure gauge
6. Main switch
7. Hose output distributor (up to 6 hydraulic connections)
8. Hose-applicator electrical connections
9. Compressed air hook-up (Max. 6 bar)
10. Set of pump drain valve and filter.
11. Automatic pellets adhesive feeder
12. Electroválvula cargador automático de adhesivo
13. Reset lighted button
14. Reset button to cancel acoustic signal
15. Pneumatic vibrator
16. Suction area
17. Flexible loading hose



Control card components

1. Melter grid indicator LED
2. Gun indicator LED
3. Temperature set point
4. Real temperature
5. ON/OFF switch
6. Standby function
7. Temperature OK LED
8. Time scheduling
9. Left/right button - channel selection
10. Up/down button - temperature modification
11. Hose indicator LED



Optional equipment

To increase the functionality of the melter machines, the following optional elements can be incorporated:

Low-level warning light option



This warning light is an optional feature and you may choose between a colourless low-level warning light (white) or a two-colour low-level warning light (white) and temperature OK light (green).

Automatic control option



The VP-200 proportional valve system must be requested separately and select between VP with or without connector.

Accessories

If some of the different machine configuration options have been chosen, it will be necessary to purchase the following accessories separately:

- **Adaptation plate for micron equipment.** For adapting 4, 8 and 16l equipment from the Micron line and the current 5, 10, and 20l Micron equipment.

3. INSTALLATION

Warning: The melters Micron MOD are equipment with current technology and with certain foreseeable risks. Therefore, only allow qualified personnel with sufficient training and experience to use, install or repair this equipment.

Introduction

The Micron MOD melters are delivered with all the materials necessary for their installation. However, some components must be provided by the user himself, according to the location and connections in each particular installation:

- Anchoring screws for the melter/applicator equipment
- Power cord and plug for electrical power
- Pneumatic pipe and connection to the compressed air system
- Multicore cable for external electrical control
- Optionally, a gas ventilation system

Installation requirements

Before installing Micron MOD melter equipment, we must make sure that the space assigned to it permits installing, connecting and using the entire system. Similarly, we must check to see that the electrical and pneumatic supplies meet the necessary requirements of the melter/applicator equipment being installed.

Free space



Item	Description	Dimension
A	EQUIPMENT LENGTH	587 mm
B	EQUIPMENT WIDTH	341 mm
C	EQUIPMENT WIDTH HEIGHT	481 mm
D	EQUIPMENT HEIGHT WITH AUTOMATIC FEEDER (APROX.)	577 mm
E	EQUIPMENT LENGTH WITH ELECTRICAL CABINET DESPLACED	838 mm

Electrical Consumption

In order to install a Micron MOD melter, we should take into consideration the total consumption of the installation, including the consumption of the installed hoses and applicators.

Before connecting, make sure that the voltage that is being connected to the melter/applicator is the correct one appearing on the equipment's characteristics plate.

Connect the machine and check to see if it is well grounded.



Warning: Risk of electrocution. Even when the equipment is turned off, voltage remains in the intake terminals, which may be dangerous during internal equipment manipulations.

Install a power switch for disconnecting the Micron MOD equipment from the electrical network. It must be protected against overload and short circuits by circuit breaker and install appropriate personal protection leads to mass by differential switch.

Consumption figures, according to melter/applicator and output configuration, are included in the table in the section 'Electrical power connection'.

Compressed air

To install Micron MOD melters it is necessary to have a dry, non-lubricated compressed air system with a maximum pressure of 6 bar.

The applicator's internal pneumatic equipment is able to work with a minimum of 0.5 bar, however, pressure lower than this will cause intermittent operational anomalies.

The air consumption is according to the number of stroke made by the pump cylinder, which in turn depends on the adhesive consumption during the application. It is therefore necessary to estimate this consumption in all cases. Generally speaking, we can provide as a maximum consumption value 40-50 l/min for a pressure of 6 bar at maximum pump speed and only for the pneumatic unit.

Other factors

While installing Micron MOD melters other practical considerations should be kept in mind:

- Make sure the adhesive loading area and the flexible loading hose are accessible for easy filling of the melter.
- Position the melter equipment in such a way that you can easily see the front panel display where temperatures and possible alarm signals are shown.
- As much as possible, try to avoid unnecessarily long hoses that result in elevated electrical energy consumption levels and pressure drops.
- Do not install the melter/applicator equipment beside powerful heat or cooling sources that may have distortional effects upon its operation.
- Avoid melter/applicator vibrations.
- Make sure that the melter/applicator maintenance areas (filter, purging valve, melter grid interior, etc.) are easily accessible.

Unpacking

Before proceeding with the installation of the melter/applicator, it should be removed from its location on a pallet and examined in order to detect any possible breakage or deterioration. Communicate any defect, even to the outer packing materials, to your Meler Representative or to the Main Office.

Contents

The Micron MOD packing materials may contain accessories that form part of the same order. If this is not the case, the following are the standard components that accompany the melter:

- Instruction manual.
- Guarantee card.
- Hose couplings.
- Connector for external I/O (included on the power card).

Mounting the equipment

For mounting the Micron MOD set the base in the desired location using the indicated holes M8 screws.



Warning: Make sure that the place where the base plate is fastened is levelled, vibrations free and is able to support the weight of the equipment in addition the melter grid load.

Electrical power connection

Micron MOD melters are designed to be connected to the electrical power supply in three possible ways, depending on the power of different elements connected:

- 1-phase 230 VAC with neutral.
- 3-phases 400/230 VAC with neutral.

A good ground connection is required in all cases.

Consumption figures, according to melter/applicator and output configuration, are included in the table. Due to high power connected Meler recommends 3-phases 400/230 VAC with neutral connection.

Equipment	No. Outputs	1 Phase	3 Phases
		230 VAC	400 VAC Y
Micron MOD	2	21.39 A	10.95 A
	4	31.82 A	10.95 A
	6	42.26 A	15.65 A



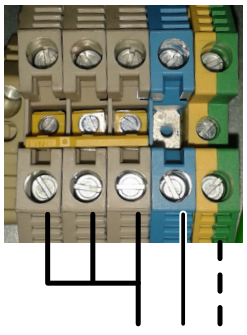
Warning: Risk of electrical shock. Carelessness may cause injury or death.



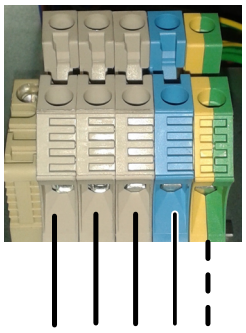
Open the electric cabinet door as far as possible. Thread the power cord (max. Ø14.5mm) through the electrical wall bushing Pg 16 and fasten it to the inside anchor, making sure that the cord reaches the power card connector at the position where it will be installed.

Connect each wire in the power cord to its corresponding place on the power intake connector on the power card.

Consumption values concerning each equipment can be found in the characteristics plate.



LN~230V 50Hz + PE



3N~400/230V 50Hz+ PE



Pneumatic connection

Before connecting the pneumatic power to the melter, make sure the pressure regulator is completely closed. To do this, turn the regulator located on the front of the equipment next to the pressure gauge counterclockwise as far as it will go.

Connect the plant air supply (max. 6 bar) to the melter/applicator intake using flexible tubing with an outside diameter of 8 mm. The equipment is provided with a quick coupling for this purpose.

Activate the air supply to pass and turn the pressure regulator clockwise.

Adjusting to 1 bar of pressure is enough for checking the pump operation.



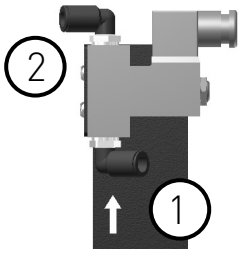
The pump will not operate and the pressure gauge will show 0 bar until the melter/applicator and the hoses-applicators connected to it reach the correct temperature. Once the pump operation has been checked, you may adjust the pressure to the operational value you wish.

In the pressure gauge can be found pneumatic and hydraulic pressure values, the relation between both are 1:13,6.



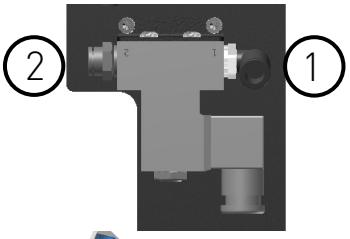
Autoloader pneumatic connection

Before connecting the pneumatic air supply to the automatic pellet feeder, make sure the general pressure regulator or corresponding stopcock is completely closed. How you connect the pneumatic air supply depends on whether or not the equipment has a pressure regulator (PR) .



1. If it does not have a pressure regulator (PR): connect the air network of the plant (6 bar max.) to the electrovalve inlet if the autoloader, which is marked with an arrow (1), using a flexible tube with an exterior diameter of Ø10 mm. The unit has a quick coupling to help you do so.

Connect the network air outlet (2) to the Y-coupling (3) located near the adhesive suction port using a flexible tube with exterior diameter of Ø10 mm.



2. If it does have a pressure regulator (PR): connect the air network of the plant (6 bar max.) to the electrovalve inlet of the autoloader, which is marked with the number 1 (1), using a flexible tube with an exterior diameter of Ø10 mm. The unit has a quick coupling to help you do so.

Connect the network air outlet, which is marked with number 2 (2), to the Y-coupling (3) located near the adhesive suction port with a flexible tube with exterior diameter of Ø10 mm.



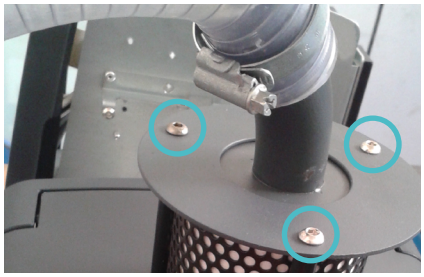
Once connected, let the air pass through and check that it does not exceed 6 bars of pressure. Higher pressures would be an unnecessary expense and could produce turbulence inside the melter basket and cause malfunctioning of the unit.

Warning: The air supply intake of the equipment and the air supply intake of the autoloader must be different, because if you connected to a single air supply intake the air supply to the piston might be affected when the adhesive loader is in operation.



Suction tube connection

The suction tube should be connected to the swievel elbow of the vacuum feeder, inserting it into the inside of the metallic mouth down to its bottom.



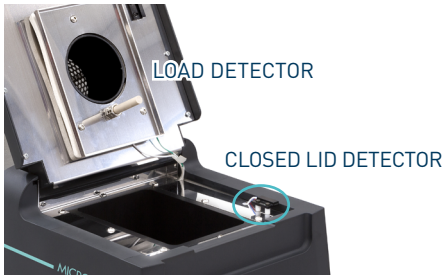
Place the swievel elbow to the most convenient position for installation, depending on the location of the hot melt container.

Therefore:

- Loosen slightly the three fixing screws for the lid of the filter and set the swievel elbow.
- Place the swievel elbow to the desired position, twisting it in the required sense.

- Tighten the three fixing screws to the position of the elbow and prevent their movement.

Connecting control detectors



The vacuum feeder has two control sensors for the control of the operation of the system.

The low level detector detects a low level of adhesive in the melter grid, in order to activate the filling of adhesive and when it has reached the right level to stop this filling. This sensor is located in the lid.

The 'closed lid' detector allows stop loading procedure when the lid is opened, preventing the projection of adhesive outside. This detector is located at the inlet of the fuser grill and the lid.

Both sensors are wired in a single connector at the electrical cabinet.

Placing the suction tube



To transfer the adhesive from the adhesive container to the hot melt equipment, the suction tube should be inserted to the bottom of the container.

The four flaps that protects the entrance of the suction tube are designed to keep the suction mouth open and without obstructions. It maintains a free way for the suctioned adhesive.

The vibratory element (pneumatic) keeps the adhesive loose around the entrance to facilitate its suction.

The aspiration element uses compressed air. By the help of the venturi effect, a depression is created in it, that absorbs pearled and pallet adhesive and drives it to the shell of the hot-melt system.

The Venturi effect, applied to the vacuum feeder, consists in a decrease of the air pressure by an air flow inside the closed circuit while increasing the air speed when passing through the narrowing of the entry mouth.

As the entry of aspiration is connected to this point, the aspired adhesive stays in it and is transported to the hot-melt melter grid through the flexible communication hose.

Hose and applicator connection

Micron MOD melters use standard Meler components. The entire range of 'classic', 'compact' and 'manual' hoses and applicators may be connected to this equipment. Up to six hose-applicator outputs may be connected to this equipment.



Warning: When connecting hose-applicator outputs, verify that the connected power is not above the maximum allowable power for each output.

Micron MOD melters are equipped with a six outputs hydraulic distributors. Connect the hoses to the distributor in order, following the numbering in the diagram.

Caution:

- In order to identify each hose-applicator, electrically connect them to the connector with the same number as the output they use.
- It is preferable to use couplings at a 90° angle to minimize the space the hoses occupy. Using straight couplings usually results in curves with very small radii that may damage the inside of the hose.
- Save the screw-on caps that are removed from the distributor in order to connect a hose. They may be necessary in the future if a hose is removed from its location.
- Perform the electrical hose and applicator connections with the equipment turned off. Failing to do so may result in electrical defects in the connection and the appearance of alarm messages on the melter display.





Parameter Programming

Once the melter and its components are installed, you will need to program the operational parameters appropriate for the specific application that will be performed.

Micron MOD melters simplify this task as much as possible, allowing the operator to modify only those parameters that are necessarily variable for each application.

Among the various parameters, it is necessary to program the set point temperature values for each component connected and the value for overheating warnings. There are two other parameters (weekly start-up and shut-down programming and the standby temperature value) left to program in advanced systems, although the factory default values are perfectly valid for operational purposes.

Programming working temperatures

The melters/applicators leave the factory with the following set point temperatures:

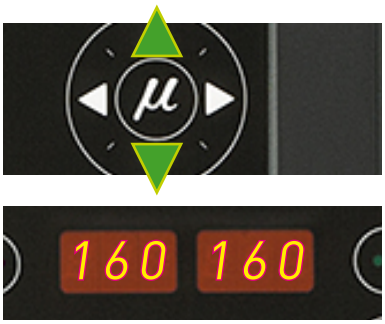
- 160 °C for the melter grid and the distributor
- 150 °C for hoses and 160 °C for appicators

The general process for modifying set up temperature values for any component is described below.

1. Select the component for which you wish to modify the value with the left-right arrow.

   The corresponding LED will blink quickly.



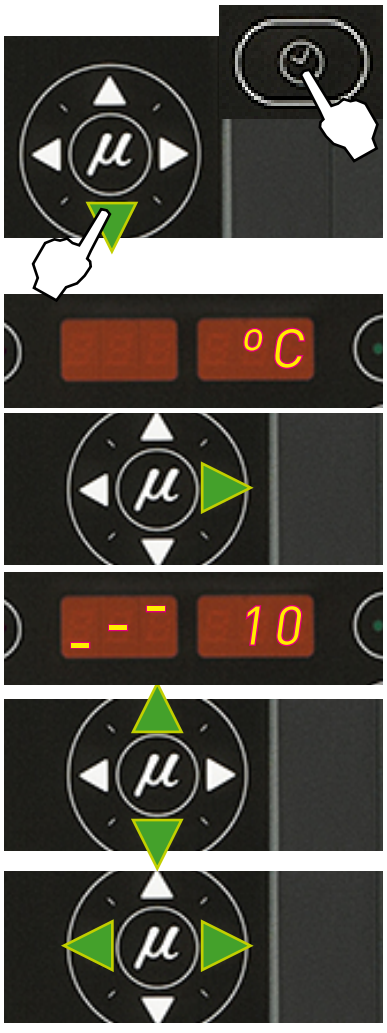


2. Using the up-down arrow, select the desired value for the set point temperature.

3. After ten seconds, the LED will stop blinking and the display will change by default to the set point temperature, saving the changed data.

This simple process must be repeated for each one of the components installed on the melter/applicator.

Selecting the overheating value



1. Press the buttons with the clock symbol and the down arrow at the same time to enter the special menu.

   The choice of display units (ºC or ºF) will appear on the display.

2. Using the right arrow, we advance to the next screen where the overheating symbol appears. _ _ _

3. Select the desired value with the up-down arrow.

   The value displayed corresponds to the increase in real temperature over the set point temperature permitted without activating the alarm message.

4. Use the right arrow to advance to the next screen.

5. Exit the special menu using the left arrow and the melter grid temperatures will once again be displayed.

All the special menu values will be saved.

Keeping a component on display

By default, the main display shows the melter grid temperatures. However, it is possible to display indefinitely the temperatures of any component for analysis or tracking.



1. Select the component you wish to see permanently with the left-right arrow.

   The corresponding LED will blink rapidly.

2. Hold the arrow button down for two seconds, selecting the desired component.



3. The display will now remain on the selected component, without changing.

4. Simple press any left-right arrow button again to restore the default display (melter grid).

External I/O connections

The melter/applicator's input and output signals (I/O) allow it to communicate with the main machine simply and directly.

There are two signals that may be used to communicate with the main machine:



- **Temperatures ok**_an output from a non-voltage contact that communicated to the main machine (or to a warning light beacon) that all the system temperatures have reached 3° below their set point value (and the delay time have finished) during start-up, or that their real value is not 20°C below their set point value during operation.
- **Output disabled**_disabled input signal for each hose-applicator output via a non-voltage contact. With a closed contact, the output remains activated (output on); with an open contact, it is deactivated (output off).



Warning: Risk of electric shock. Carelessness may cause injuries or death.

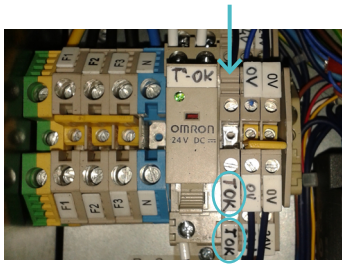
Temperature ok

1. If only this signal will be connected, use a 0.5 mm^2 two-wire cable.

   Install an electrical wall bushing Pg13.5 on the equipment base plate next to the electrical supply input.



2. Open the electric cabinet door as far as it will go. Run the signal cable (max. Ø12.5 mm) through bushing Pg13 and attach it to the interior fitting, making sure the cable reaches the indicated terminal.



3. Connect the terminals labelled as T OK.

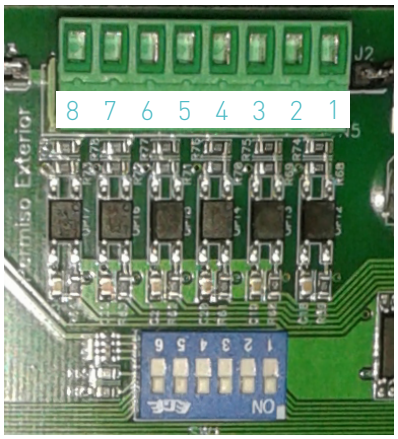
4. Check that the cable is correctly connected and that its passage through the electric cabinet presents no risk of jamming, being cut or any other accidental damage.



Warning: It must be connected to 24 AC or DC voltage. If you connect this signal to 230V load current cannot be less than 50mA.







Output disabled

1. If this is the only signal being connected, use a seven-wire cable no smaller than 0.22 mm^2.

   Install an electrical wall bushing Pg13.5 on the equipment base plate next to the electrical supply input.

2. Open the door to the electrical cabinet as far as possible. Thread the power cord (max. Ø12.5mm) through the electrical wall bushing Pg13.5 and fasten it to the inside anchor, making sure that the cord reaches the control card connector at the position where it will be installed (CN 5).

3. Remove the connector from the card and connect the two cable wires to their corresponding connector terminals:

   1 common (+) voltage output

   2 input for disabled output 1

   3 input for disabled output 2

   4 input for disabled output 3

   5 input for disabled output 4

   6 input for disabled output 5

   7 input for disabled output 6

   8 without connection

4. Reconnect the card connector.

5. Make sure that the cable is well connected and that its path through the electrical cabinet presents no risks of snagging, being cut or any other accidental deterioration.

It is possible to select the channels that you want to control from the outside using the small switches located above the connecter. Switches 1 through 6 control each of the channels, so that the switch in the 'ON' position means heating from the equipment, without any external control.

When the switch is in the 'OFF' position, the corresponding channel does not heat unless activated from the outside, through a non-voltage contact between pin 1 (the common pin) and the pin that corresponds to the channel.

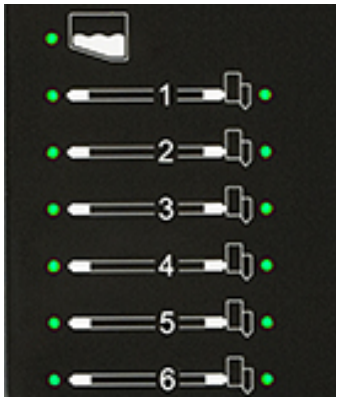
4. MELTER OPERATION

In this section we will introduce the method for using the melter. Although its operation is very simple, it should not be used by untrained personnel.

Warning: Improper use may cause damage to the machine or injury and even death to the person using it.



General information



There are three large groups of components with thermal control in a hot-melt installation: the fusion unit, the transport hoses and the applicators. All of these are controlled from the front panel of the melter equipment.

The first large group is the melter grid-distributor group. Combined to form a single unit, they have separate controls even though their set point values are the same. Therefore, when you program a set point value for the melter grid, for example 170°C, the distributor adopts this same value.

The second group is the hose group. They are identified on the front panel, depending on the equipment model, by number, from No.1 to No.6 and by the corresponding hose picture. Each one has its own set point value.

The third group is the applicators group. It is identified on the front panel, depending on the equipment model, by number from No.1 to No.6 and by the corresponding applicator picture. Each one has its own set point value.

The hose and applicators numbers are automatically assigned to the hose/ applicator channel they are connected to on the rear part of the melter.



Filling the adhesive

The adhesive loading system continuously supplies pellets to the equipment based on the application requirements, so that only the adhesive that will be used is melted. To do so, the 1.21 litre melter basket (for a density of 1 g/cm^3) is equipped with a low-level detector that warns you when the level of hot melt drops.

Warning: Before refilling the melter grid, make sure that the adhesive is the same type as that already in the melter grid. Mixing different types of adhesives can cause damage to the melter/applicator equipment.



To carry out the filling of the adhesive:

1. The melter basket lid must be closed.
2. Make sure that the autoloader hose is connected.
3. Use the ON/OFF switch to switch on the melter.
4. If the level in the melter basket is high enough, autoloading will not be activated. If the level detected is too low, after the level stabilisation time has passed the electrovalve will activate and start loading. The loading will stop when the disconnection delay time has passed.

Aviso: No abrir la tapa del equipo mientras se realiza la carga del adhesivo, en caso contrario, esta se interrumpirá y será necesario rearmar el equipo.

Starting up the melter equipment

Before starting up the melter equipment, it is necessary to check to see if the unit has been correctly installed and all its input/output and accessory connections are correctly established.

It is also necessary to make sure that the equipment has been filled with adhesive and that the operational parameters have been programmed.



To start:

1. Connect the melter's switch.



If the control card was turned off the last time the machine was disconnected, it will remain tuned off when the machine is started up again (time display).

If the control card was on the last time that the machine was disconnected, it will turn on when the machine is started up again.

2. Press the ON/OFF button on the control card to turn it on, if it not already activated.

By default, the set point and real temperature values shown are those corresponding to the melter grid.



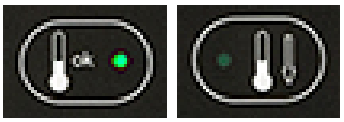
The melter grid heating control LED (green) will light up and the melter grid will begin to heat.



One it has reached 3° below the programmed temperature (set point) of the melter grid, a programmable delay timer starts until, guaranteeing fusion, the pump receives permission to operate and the signal will be sent to the main machine, indicated by the two corresponding (green) LEDs.



While the system is running the delay timer both LEDs remains blinking until the programmed time value has been reached. If then, any other element has not reached 3° below its temperature setting point, the LEDs turn off.

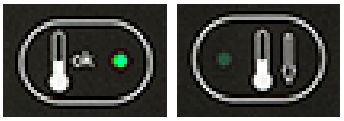


If the system is shut down, for any possible mode, when it is turning on the delay timer only starts again if the melter grid temperature is 20° below setting point.



3. Use the machine's pressure gauge to make sure that the generated pressure is adequate. Values below 0.5 bar may cause erratic pump action.

Melter equipment displays



Micron MOD melters have two displays built into their control panel, with three sets of 7 segments each for displaying the temperature values (set point and real temperature), programmable parameters and alarms.

They are equipped with LED indicators to display the heating of each component:



LED display	Component heating	Component status
constantly lit	constant	low temperature
blinking slowly	as need (according to PID parameters)	temperature near set point
blinking rapidly	programming or display	change in set point values
off	not heating	temperature reached

as well as the pump activations and the main machine connection signal.

They are also equipped with LEDs indicating equipment connection/ disconnection and standby function connection/disconnection:

LED display	On/off	Standby
constantly lit	turned off unit	function activated
blinking slowly	deactivation programmed for the current day	activation programmed for the current day
blinking rapidly	activation/deactivation programming mode	activation/deactivation programming mode
off	unit in operation	function deactivated
simultaneous intermittence from leds of pump activation and main machine signal	timing in progress, once the melter grid has reached its set point temperature	



Displaying the temperature for each component



The temperature may be displayed for each component (melter grid, distributor and each hose and applicator) by selecting the component with the cursor.

Press the left-right arrow until the desired component is displayed.

After 10 seconds, the display will return to the default component (the melter grid).

If you wish to keep the component displayed permanently, press and hold the left-right arrow for 2 seconds while selecting the chosen element.

The following is the display sequence:

distributor<—melter grid<—hose1<—applicator1<—...<—hose6<—applicator6

distributor—>melter grid—>hose1—>applicator1—>...—>hose6—>applicator6

To remove a component from permanent display, simply press either of the left-right arrows.

Alarm displays



Micron MOD melter equipment tell the user when a malfunction has occurred in the unit, sending warning messages that may be seen on the control panel display.

Code	Source	Actions		
		Heating	Pump	Main machine signal
Err 0	melter grid broken sensor	only melter grid off	off	off
Err 1	hose1 broken sensor	only hose1 off	off	off
Err 2	applicator1 broken sensor	only applicator1 off	off	off
Err 3	hose2 broken sensor	only hose2 off	off	off
Err 4	applicator2 broken sensor	only applicator2 off	off	off
Err 5	hose3 broken sensor	only hose3 off	off	off
Err 6	applicator3 broken sensor	only applicator3 off	off	off
Err 7	hose4 broken sensor	only hose4 off	off	off
Err 8	applicator4 broken sensor	only applicator4 off	off	off
Err 9	hose5 broken sensor	only hose5 off	off	off
Err 10	applicator5 broken sensor	only applicator5 off	off	off
Err 11	hose6 broken sensor	only hose6 off	off	off
Err 12	applicator6 broken sensor	only applicator 6 off	off	off
Err 13	distributor broken sensor	only distributor off	off	off
Err 100	melter grid overheating	all components off	off	off
Err 101	hose1 overheating	all components off	off	off
Err 102	applicator1 overheating	all components off	off	off
Err 103	hose2 overheating	all components off	off	off
Err 104	applicator2 overheating	all components off	off	off
Err 105	hose3 overheating	all components off	off	off
Err 106	applicator3 overheating	all components off	off	off
Err 107	hose4 overheating	all components off	off	off
Err 108	applicator4 overheating	all components off	off	off
Err 109	hose5 overheating	all components off	off	off
Err 110	applicator5 overheating	all components off	off	off
Err 111	hose6 overheating	all components off	off	off
Err 112	applicator6 overheating	all components off	off	off
Err 113	distributor overheating	all components off	off	off

When an alarm appears, the control unit takes a series of steps to protect the unit. Simply correct that malfunction and the control unit will reactivate the equipment functions.



Standby function does not generate any alarm. If a temperature sensor is broken, the system heats all the elements except the one where the failure is located.

In case of overheating the system cuts off inmediately the damaged element. After three minutes if the failure continues all the system will be shut down. After repairing the failure the system starts heating normally.

Operational pressure display and adjustment

The air pressure with which the pneumatic pump control device works with is shown on the pressure gauge located on the base of the melter/applicator. The pressure must be adjusted according to the application needs.



To do this, turn the regulator located on the front of the equipment next to the pressure gauge counterclockwise as far as it will go. Activate the air supply to pass and turn the pressure regulator clockwise.



Warning: Values below 0.5 bar may cause erratic pump action. Never surpass 6 bar of pressure. The multiplying effect of the pump elevates the hydraulic pressure to dangerous levels for component operation.

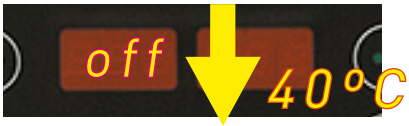
Temperature adjustment

The melters/applicators leave the factory with the following set point temperature values:

- 160 °C for the melter grid and distributor
- 150 °C for the hoses and 160 °C for applicators
- °C displayed
- Overheating value: 20°C
- Standby value: 40%
- Delay time: 10 min
- On/off and stanby programming: ON
- Low level detector: ON

The general process for adjusting the temperatures of each components is described below.







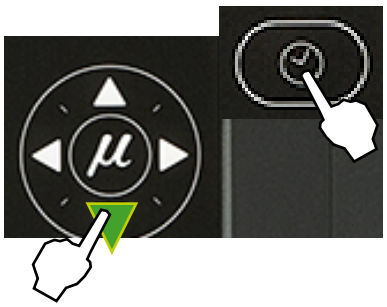
1. Select the component whose value you wish to modify using the left-right arrow. The melter grid and the distributor have the same set point value.

   The corresponding LED will blink rapidly.

2. Select the desired set point temperature value with the up-down arrow. Below 40°C the set point value displays 'OFF' canceling the heating of that element.

3. After ten seconds, the LED will stop blinking and the display will show the melter grid's set point temperature value by default, saving the modified data.

This simple procedure should be repeated for each of the components whose set point temperature value you wish to modify.



Programming the applicator parameters

1. Simultaneously press the buttons with the clock symbol and the down arrow to enter the special menu.

   The choice of temperature display units (°C or °F) will appear on the display.

2. Select the desired value using the up-down arrow.

3. Use the right arrow to move to the next display where the overheating symbol appears. _ _ _

4. Select the desired value (between 10 and 25) using the up-down arrow.

   The value shown corresponds to the increase in real temperature allowed over the set point temperature without activating the alarm message.

5. Use the right arrow to go to the next display where the standby function symbol appears. _ _ _

6. Use the up-down arrow to select the desired value (between 25 and 55).

   The value shown corresponds to the percent decrease in the real temperature compared to the set point temperature that will occur when this function is activated.

7. Use the right arrow to go to the next display where delay time value appears.

8. Use the up-down arrow to select the desired value (between 0 and 60 min).

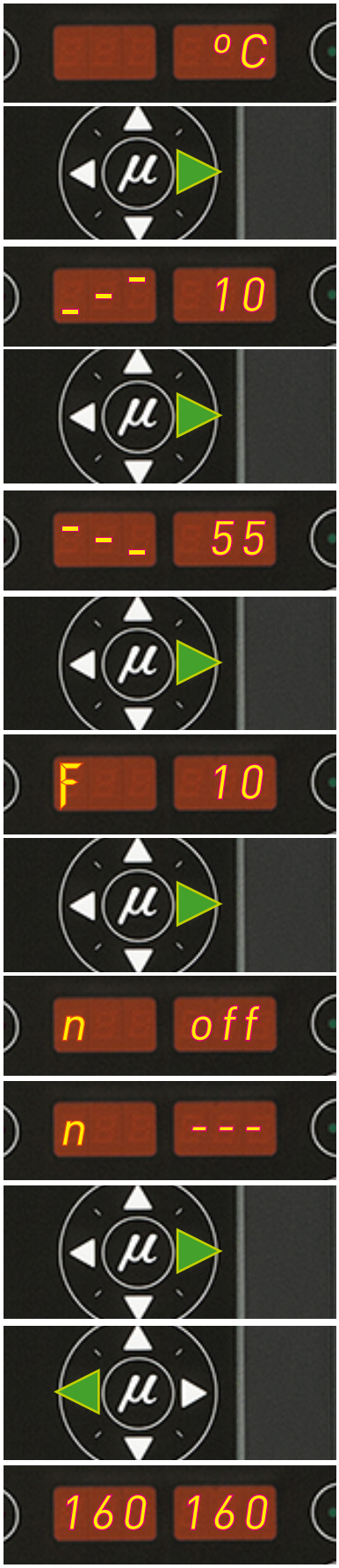
9. Use the right arrow to advance to the next screen, where the level detector activation/deactivation is found.

10. The low level function on this equipment remains off at the control board therefore t 'n' value will always be OFF.

11. Use the right arrow to return to the initial parameter.

12. For any parameter, the left arrow may be used to exit the special menu and display the melter grid temperatures once again.

To record any parameter, you must always move to the next parameter, using the right arrow.



Setting the clock

Micron MOD melters are equipped with a weekly programmable system controlling equipment connection and disconnection and activating and deactivating the standby function.

Before programming these functions, it is necessary to introduce into the control unit data corresponding to the day and hour used to execute these programs.



Programming the current day and hour

1. Press the button with the clock symbol.

   A '0' will appear on the display, indicating the program for current day and hour information.

2. Press the button with the clock symbol once again.

   On the left display, you will see the time with a dot, indicating that this is the value that may be modified, while the minutes appear on the second display.

3. Use the up-down arrow to select the desired value.

4. Press the button with the clock symbol once again.

   Now the dot will appear on the right display.

5. Use the up-down arrow to select the desired value.

6. Press the button with the clock symbol once again.

   A number appears, indicating the day of the week (1- Monday / 7- Sunday).

7. Use the up-down arrow to select the desired value.

8. Press the button with the clock symbol once again.

   The '0' program appears once again.

9. Pressing either the left or the right arrow button will exit this program and return to the melter grid temperature display.

Programming equipment activation/deactivation

You may program an activation and a deactivation time for every day of the week, from Monday (1) to Sunday (7).

Time is expressed in 15 minute increments, so we cycle from 10.0 (10 hours and 0 minutes) to 10.1 (10 hours and 15 minutes) to 10.2 (10 hours and 30 minutes) to 10.3 (10 hours and 45 minutes).

1. Press the button with the clock symbol

   A '0' will appear on the display, indicating the program for current day and hour information.

2. Use the up-down arrow to select the value for the desired day of the week, from Monday (1) to Sunday (7).

3. Press the button with the clock symbol once again.

   Two times will appear, one in each display. The display on the left shows the start time, while the display on the right shows the finish time.

4. The blinking dot next to the start time indicates that this is the value that may be modified. Use the up-down arrow to select the desired value.

5. Press the button with the clock symbol once again.

   The dot changes to the finish time.

6. Use the up-down arrow to select the desired value.

7. Press the button with the clock symbol once again.

   The selected program will appear once again. Use the up-down arrow to select other programs.

8. Pressing either the left or the right arrow button will exit this program and return to the melter grid temperature display.



The green LED next to the 'ON/OFF' button will remain blinking as long as there is an equipment disconnection time programmed for the current day.

Disabling the equipment activation/deactivation program

It is possible to disable the equipment activation/deactivation programming without canceling the daily programming. This way the programmed data is saved, but the programming will have no effect on the equipment.



1. Press the button with the clock symbol.

   A '0' will appear on the display, indicating the program for current day and hour information.

2. Use the up-down arrow to go past the selection for the last day of the week (7).

   The message 'ON/OFF' will appear on the display, depending on the current status.

3. Press the button with the clock symbol once again.

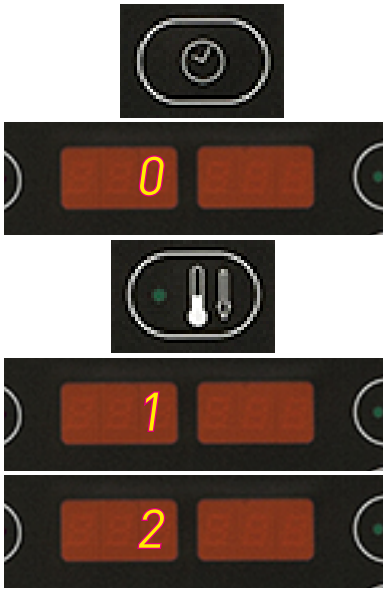
   The status will alternate each time you press the button.

4. Pressing either the left or the right arrow button will exit this program and return to the melter grid temperature display.

Programming the equipment's standby function activation/deactivation

You may program an activation and a deactivation time for every day of the week, from Monday (1) to Sunday (7).

Time is expressed in 15 minute increments, so we cycle from 10.0 (10 hours and 0 minutes) to 10.1 (10 hours and 15 minutes) to 10.2 (10 hours and 30 minutes) to 10.3 (10 hours and 45 minutes).



1. Press the button with the clock symbol.

   A '0' will appear on the display, indicating the program for current day and hour information.

2. Press the standby function button.

   A '1' will appear, indicating the first day in the standby function programming.

   [Since the current time and date are values common to both programs, the value '0' does not appear in this menu].

3. Use the up-down arrow to select the desired value for the day of the week, Monday (1) to Sunday (7).

4. Press the button with the clock symbol once again.

   Two times will appear, one in each display. The left display shows the start time, while the right display shows the finish time.

5. The blinking dot next to the start time indicates that this is the time that may be modified.

   Use the up-down arrow to select the desired value.

6. Press the button with the clock symbol once again.

   The dot changes to the finish time.

7. Use the up-down arrow to select the desired value.

8. Press the button with the clock symbol once again.

   The selected program appears once again. You may use the up-down arrow to select other programs.

9. Pressing either the left or the right arrow button will exit this program and return to the melter grid temperature display.



The green LED next to the 'maintenance' button will remain blinking as long as there is an equipment standby function activation time programmed for the current day.

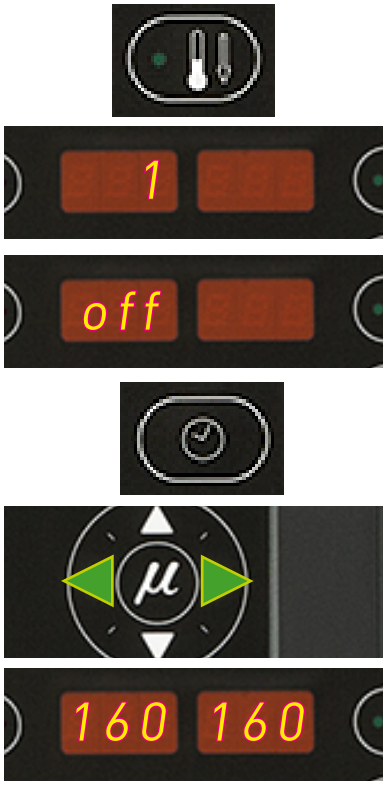
Disabling the equipment standby function programming

It is possible to disable the equipment standby function programming without canceling the daily programming. This way the programmed data is saved, but the programming will have no effect on the equipment.

1. Press the button with the clock symbol.

   A '0' will appear on the display, indicating the program for current day and hour information.





2. Press the standby function button.

   A '1' will appear, indicating the first day in the standby function programming.

3. Use the up-down arrow to go past the selection for the last day of the week (7).

   The message 'ON/OFF' will appear on the display, depending on the current status.

4. Press the button with the clock symbol once again.

   The status will alternate each time you press the button.

5. Pressing either the left or the right arrow button will exit this program and return to the melter grid temperature display.

Special function buttons

The simplicity of programming Micron MOD melters reduces the use of the special function buttons to only the standby function.

This manual function allows you to alternate between the operational mode and the standby mode. Using the standby function during periods of melter/applicator inactivity helps save energy and allows the heated elements to return quickly to their set point temperatures once you return to the operational mode.



When the standby function is activated, the set point temperature for all the heated components is lowered to a certain value, according to the programmed parameter (see 'Programming melter/applicator equipment parameters'). For example, if the melter grid set point temperature is 160 °C and the standby temperature is programmed as 30 (30%), when you press the standby function button, the melter grid set point temperature will drop to 112 °C (70% of 160 °C).

The three means for activating the standby function available with Micron MOD melters have the following priority protocols:

1° manual standby function button.

2° standby function external signal.

Therefore, if the function is activated by any of the three means, it may always be deactivated using the manual button. On the other hand, if it was activated using the manual button, it may not be deactivated by either of the other two means. The weekly programming may not deactivate a standby function that has been activated by either of other two means.

The following criteria are suggested for standby function use:

- If the period of inactivity is less than 2 hours, allow the melter applicator equipment to heat as normal.

- If the period of inactivity is more than 2 hours and less than 4 hours, use the standby function.

- If the period of inactivity is over 4 hours, use one of the following two options: turn off the equipment if you do not plan on using it for the rest of the day or keep the standby function on if you plan on using the equipment during that same day.

Start up and operation of the loader

The automatic pellet feeder operates fully automatically regardless of whether the equipment temperature is OK; for example, if the equipment is running it will begin to load whenever it detects that the level is too low, even if the equipment temperature is not OK. The normal loading process is as follows, and proceeds according to the scheme below:

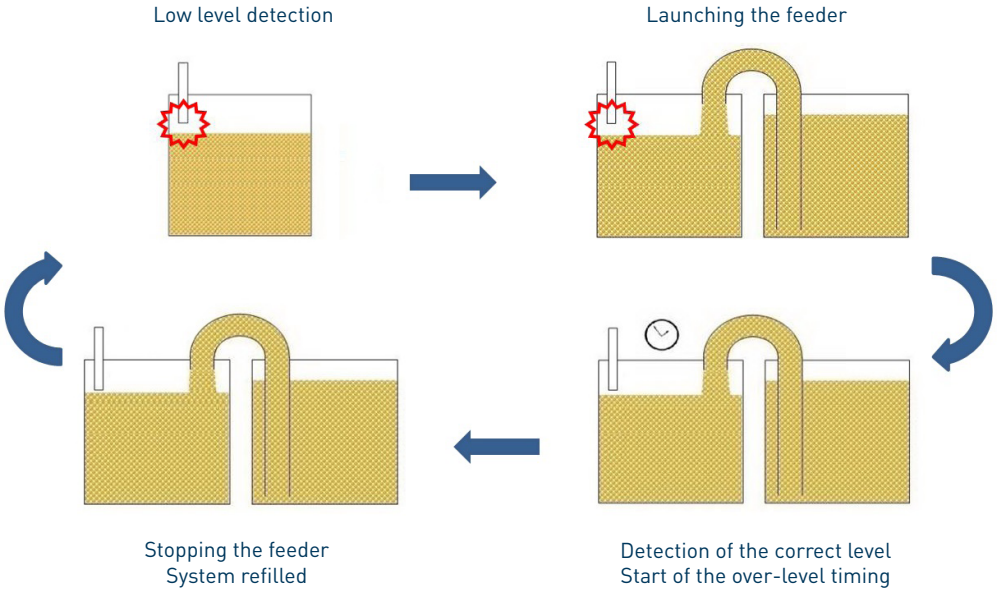
1. Push the switch on the front of the control panel to switch on the equipment (see figure).



2. If the melter basket level is high enough, autoloading will not be activated and the warning light and the buzzer will both be OFF.

3. If it detects that the level is too low after the level stabilisation time has passed, the electrovalve will be activated and the warning light will go on, at which point loading will begin.

4. When it detects that the level is high enough after the disconnection delay time has passed, loading will stop, and the electrovalve and the warning light will both switch off.





Loader standby function

If the equipment temperature is OK and the "T.ST change to standby status" time has passed, the outlet to put the equipment into "STBY standby status" will be activated. With this status, the warning light will flash slowly and autoloading will not occur. There are three ways to reset this status on the equipment:

- If you push the loader "RESET" button, the programmable relay output for the standby signal will open and the equipment will go into ON status. Autoloading will be activated and the warning light will switch OFF.

- If you push the standby button on the front panel, the equipment will go into ON status; you also have to push the "RESET" button on the adhesive loader. Loading will be activated and the warning light will switch OFF.

- If you push the standby button on the front panel, the equipment will go into ON status and when its temperature is OK the programmable relay will detect it and reset the loader. Autoloading will be reactivated and the warning light will switch OFF.

If you want to disable the automatic pellet feeder, push and hold the OFF button for 3 seconds. The warning light will start to flash slowly. If you want to activate loading, push the lit "RESET" button and loading will be reactivated. OFF mode resets all existing alarms (if it goes into OFF mode with the open lid alarm activated, when loading is activated and if the lid is still open it will wait the programmed time to activate the open lid alarm).

Single-colour or two-colour warning light

If the equipment has the warning light optional feature, the colourless warning light statuses are as follows:



1. OFF: the equipment's level is high enough.
2. Steady on: the equipment is loading (EV= ON)
3. Very slow flashing: load blocked status
4. Slow flashing: equipment on standby.
5. Fast flashing: error status.

If it also has a green warning light, this signals that the equipment temperature is OK (lit) or not (off).

Level sensor adjustments

Sensitivity adjustment



The adjustable sensitivity of the sensor, depending on the material used and the hysteresis admitted to the operation of the vacuum feeder is factory pre-setted and therefore it is NOT necessary to change. In most cases the factory setting is perfectly valid to use the vacuum feeder.

If it is necessary to correct the adjustment contact the Technical Services Meler or Area Representative.

Level stabilisation time

The level stabilisation time is the time that passes between when the equipment detects that the level is too low and when the electrovalve is activated (EV=ON) to load adhesive. This parameter is not programmable from the timer menu; it is a set time that may only be modified by editing the program. The default time is 2 seconds.

Programmable times using the timer

Disconnection delay time

The extra time that the loader operates after the correct level has been reached is called the disconnection delay time. The screen shows 'T.EV 00:00s' and you can program the first digits in seconds and the digits after the ":" in hundredths of a second.

Operating alarms

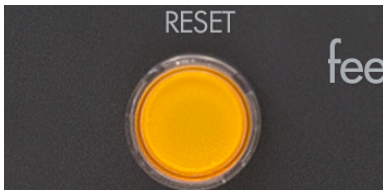
1. Load error alarm

Each time the load sensor detects low adhesive a safety timer is connected (Default 90 seconds). That controls of time lap the device is charging. This timer is resetted when the sensor detects correct adhesive level.



In case that within the scheduled time (90 seg) the level sensor has not detected the correct level, the system assumes the existence of a failure in the loading circuit and connects the warning signs:

- Beep buzzer.
- Amber light blinking signal in the control panel.



Both signals remain activated while they are not restarted.

Pressing the black button the acoustic signal can be overridden.

Pressing the amber light button the system will be resetted. The security time will begin to count again.

You just have to press the reset button after having corrected the existing failures:

- Obstruction of aspiration hose.
- Mismatch of the sensitivity of the level sensor .
- Empty adhesive container.

2. Open lid alarm

When you open the lid of the hot-melt melter grid, the magnetic sensor gives the signal to the programmable relay to interrupt the loading procedure. Closing the lid, after 10 sec. the loading procedure restarts.





If keep the lid open longer than the time programmed into the parameter 'ALARM', the alarm is triggered and connects the warning signs:

- Beep buzzer.
- Amber light blinking signal in the control panel.

Both signals remain activated while you do not act on them.

Pressing the black button the acoustic signal stopps.

Pressing the amber light reset button the system restarts except if the lid is still open.

When either of these alarms occurs, the loading cycle stops if it had not yet begun, or does not begin if the equipment is in standby. The electrovalve output is deactivated, the warning light flashes quickly and the buzzer starts. The screen shows 'T.AL 00:00m' and you can program the first digits in minutes and the digits after the ":" in seconds.

Change to standby time

Once the equipment temperature is OK and the adhesive level is correct, as soon as loading is finished a timer begins in the program; once the programmed "T.ST" time has been reached an outlet contact is activated that puts the melter into "STBY change to standby" status. If while the timer is counting down the equipment level drops or the temperature is not OK, the timer will stop. Then, when the equipment returns to OK temperature and correct adhesive level the timer will reset and begin to count down again. The screen shows 'T.ST 00:00h' and you can program the first digits in hours and the digits after the ":" in minutes.

Setting programmable times using the timer

Inside the electric cabinet there is a programmable relay to set the disconnection delay time of the electrovalve (T.EV), the error alarm (T.AL) and the standby (T.ST) for periods of inactivity.

To open the electric cabinet, loosen the screw that holds in place the door to the electric cabinet casing on the left side, and slide it out.

The following is the procedure to change the times for each element:

1. Press the ESC key for several seconds until the cursor appears under the first digit of T.EV.

2. Use the left-right arrows to move to the value you want to change. Click OK and you will see the digit in negative (light digit over a dark background).

3. Change the T.ST value with the up-down arrows.

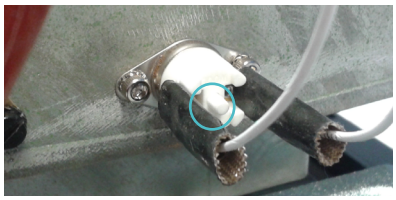
4. Use the left-right keys to move to a different digit.

5. Once finished, click the OK key to validate the changes and exit editing mode by pushing ESC. The change is now in operation.



Thermostat operation

The thermostat protects the equipment from uncontrolled rises in temperature. When the overheating value is exceeded, the thermostat is triggered and the button breaks contact. The equipment then shuts off and you must reset it for it to work again; do this by sliding open the electric cabinet and lifting the insulating blanket off the melting basket. Once the thermostat is exposed, push the button shown in the figure to reset it.



Turning off the melter equipment

If you need to disconnect the melter equipment:

1. Turn off the machine switch on the door of the electrical cabinet next to the pressure regulator.

   The depressurization valve frees pressure from the hydraulic circuit, returning the adhesive to the melter grid.

2. Disconnect the pneumatic power to the applicators and the electrical power to the control unit programmer, if there is one.



This page is intentionally left blank.

5. MAINTENANCE

Warning: The melter equipment is equipped with current technology, but has certain foreseeable risks. Therefore, only allow qualified personnel with enough training and experience to operate install or repair this equipment.



The following table briefly summarizes the indications for adequate melter equipment maintenance. Always read the corresponding section carefully.

Operation	Frequency	Refer to
External cleaning	Daily	Equipment cleaning
System depressurization	Before performing maintenance tasks and repairing the hydraulic system	System depressurisation
Remove electrical cabinet	Before performing pneumatic unit or pump shaft maintenance	Access to pneumatic unit
Pneumatic system	- Daily: pressure control - Weekly: leakage inspection	Access to pneumatic unit
Filter cleaning or changing	- As needed (once a year minimum) - With each adhesive change	Pump filter maintenance
Emptying and cleaning the melter grid	- When burnt adhesive is present - With each adhesive change	Cleaning the melter grid
Check thermostat operating	- Check in continuous work	Thermostat maintenance
Load sensor	- Daily: load control - Weekly: cleaning	Control of load sensor
Suction hose	Weekly	Aspiration hose inspection
Exhaust air filter	Weekly	Automatic feeder filter maintenance
Pneumatic vibrator	Weekly	Control of pneumatic vibrator
Equipment change	- Equipment change or repair	Remove the equipment from its base

If the equipment does not work or works incorrectly, you may refe r to the next chapter ‘6. Quick problem solving’.

Equipment cleaning

To continue to take advantage of the melter’s benefits and to ensure the perfect mobility of its components, it is necessary to keep all its parts clean, especially the ventilation grate on the upper part of the machine.



Warning: Risk of electric shock. Carelessness may result in injury or death.

Clean the exterior using a cloth moistened with water. Do not use flammable liquids or solvents.

To carry out external cleaning:

- Use cleaning products compatible with polyamide materials.
- Apply the cleaning product with a soft cloth.
- Do not use sharp tools or scrapers with sharp edges.

Removing and changing exterior panels:

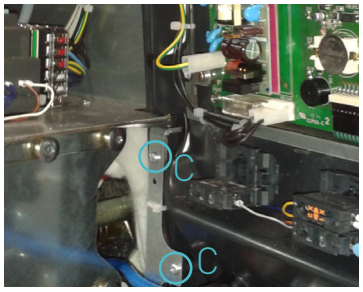


1. Turn off the melter.

2. Disconnect the compressed air from the machine intake.

3. To remove the casing from the machine, first you have to separate the electrical cabinet from the melter grid. To do this, slacken the 1/4 turn screw as indicated (A) and slide it along the guides.

3. To remove the electrical cabinet door, open the door by turning the 1/4 turn screw as indicated (B), lift the door, turn it and remove the screws (C).



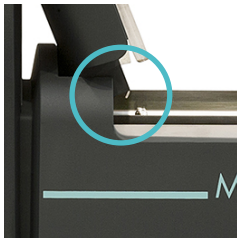
4. To remove the electrical cabinet casing, slacken the screws (D) that hold it to the base of the machine and the screws (E) that hold it to the structure of the electrical cabinet.



5. To remove the melter grid casing, remove screws (F) and (G) that hold this casing to the base of the equipment. The lid and the casing are removed from the melter grid at the same time.



6. The melter grid lid is removed once the melter grid casing has been dismantled. It is simply a matter of sliding the shafts at the ends along the grooves in the casing. (See diagram).



7. To assemble the casing, follow the instructions in reverse order.

System depressurisation

Micron MOD melters are equipped with a safety valve that allows you to depressurize the system whenever the equipment is pneumatically or electrically disconnected.

Before disconnecting any hydraulic component or opening any distributor output, it is necessary to follow these steps:





1. Turn off the machine switch on the door of the electrical cabinet next to the pressure regulator.

   The depressurization valve releases the pressure from the hydraulic circuit, returning the adhesive to the melter grid.

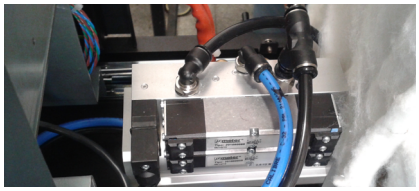
2. Purge all applicators that have been used either manually or with the corresponding program command.

Access to pneumatic unit

To access the unit for more exhaustive machine maintenance, it will be necessary to remove the electrical cabinet from its place so it can be handled more comfortably and accessibly. To do this, slacken the 1/4 turn screw that keeps the electrical cabinet in position (screw A) and slide it along the guides indicated (B).



To carry out this operation it is not necessary to open the electrical cabinet door.



Pneumatic circuit

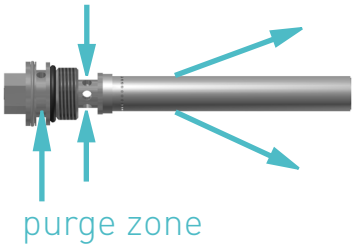
Control regularly the pressure feeding circuit. Very low pressures do not allow proper loading of the adhesive. Very high pressures can produce splash of melten adhesive in the melter grid of the melting unit and even cooling of the hot melt.

Monitor periodically if there is any leak in the pneumatic circuit. In addition to being a useless expense resulting in loss of pressure and thus malfunction of the system load.

Pump filter maintenance

The adhesive flows from the inside to the outside of the filter, with impurities being trapped inside it.

The drain valve is included in the filter cap.



When the filter is removed from its housing, all the impurities remain trapped inside, and the inside of the distributor stays perfectly clean. The filter may be cleaned or replaced directly with a new one.

No rule exists for determining when to change the filter. Several factors influence this decision:

- The type and purity of the adhesives used.
- The adhesive work temperatures.
- Adhesive consumption in relation to the time it spends in the melter grid.

- Changes in the type of adhesive used.

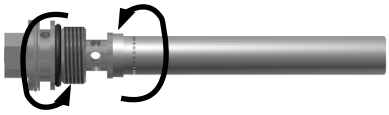
In any case, we recommend checking and cleaning the filter at least every 1000 hours of operation (melter/applicator equipment turned on).



Warning: Always use protective gloves and goggles. Risk of burns.

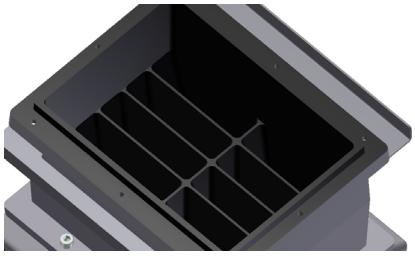
To change the filter, it should be borne in mind that the filter and purge valve are the same assembly:





1. Depressurise the system.
2. To remove the whole filter, unscrew the assembly's hexagonal plug using a 15mm socket driver and remove it.
3. Depending on the amount of dirt inside the cartridge, clean it or throw it away, following the applicable waste regulations.
4. Replace the joints if they are damaged.
5. Screw the assembly up again, clockwise.
6. Put the assembly back inside the distributor and tighten the screws.
7. Continue to work as normal.

Cleaning the melter grid



The hot-melt melter grid must be cleaned on occasion to maintain its fusion and anti-adherence properties. The melter grid is covered on the inside with PTFE.

Furthermore, when adhesives are mixed, reactions may occur between them, causing a degeneration and thus problems in unloading in the direction of the pump.

Therefore, it is recommended to clean the deposit every time that:

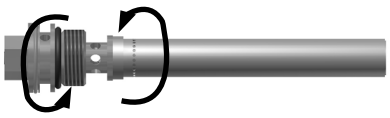
- A change is made to a different type of hot-melt.
- Too much burnt material is generated in its interior.

Cleaning burnt adhesive

1. Use up as much of the adhesive as possible.
2. Clean the adhesive remains and burnt material inside the melter grid. Do not use sharp objects that might damage the inside coating.

Warning: Use appropriate protective equipment for high temperatures.





3. Add cleaning adhesive, and pump it through the system (hoses and applicators) at list 1,5 liters aproximately.
4. Add the appropriate type and quantity of adhesive and wait for it to melt.
5. Remove the filter cartridge and clean it, if necessary (see the section 'Pump filter maintenance').
6. Reassemble the filter without the cartridge.

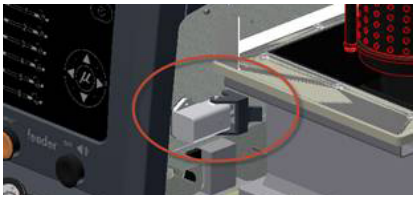


7. Pump a minimum of one melter grid through the distributor output marked number 1.
8. Remove the filter and attach it to the corresponding cartridge. Reinstall it in the distributor.
9. Refill the melter grid with adhesive and continue working as usual.

Warning: Whenever you handle the filter or any other element subject to pressure, you must always perform a system depressurization first (see the corresponding section).



If you want to remove the top of the melter grid for a more thorough cleaning, you can turn it off easily using the connector designated for separate it from the equipment.



Safety Thermostat

If there is an error in the resettable thermostat. Dismantle the tank casing with the cover and slide the electrical cabinet along. When you can see the thermostat, press the button indicated to reset it.



Control of the load sensor

It is necessary to control if the load sensor is working properly and that it allows you to maintain the desired levels.

A low load will cause a decline in the level and the possibility of not having the amount of necessary hot-melt adhesive. By contrast, an overload can cause the overfilling of the melter grid with subsequent sealing of the loading mouth.



The load sensor should remain clean of charred adhesive that may affect the proper level detection.

Inspection of the aspiration hose



Monitor that the aspiration tube is not obtured with sticked glue pallets or perls. This tube should be perfectly free of any glue plugs that impedes the smooth transfer of the adhesive from container to the melter grid of the melting unit.

The tube is mostly transparent to facilitate visual inspection of the same.

Automatic feeder filter maintenance

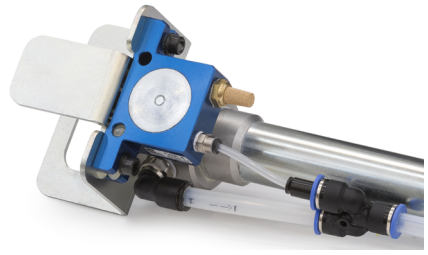


Periodically review the state of the filter located inside the discharge zone. Blow compressed air impurities that may have acceded to.

This filter avoids dust particles or glue pallets itself being spilled outside with the exhaust air. If it arrived to be plugged the system might not work properly.

To clean, unscrew the three screws of the rotary elbow lid and extract the filter.

Control of pneumatic vibrator

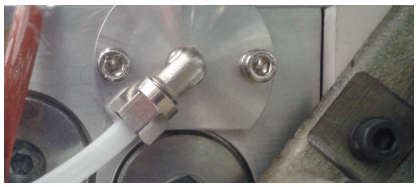


Reviewing the correct operation of the pneumatic vibrator located in the suction mouth. Ensures that it vibrates and its vibration is adequate.

Clean up the exhaust silencer of impurities and adhesive dust.

Remove the equipment from its base







For more thorough equipment maintenance, it is necessary to remove it from its present location to be able to perform operations more comfortably and with greater accessibility.

To do this, the equipment should be removed from its base following these indications:

1. Turn off the machine switch on the door of the electrical cabinet next to the pressure regulator.
2. Depressurise the system.
3. Disconnect the hoses connected to the distributor outputs both electrically and hydraulically.
4. Disconnect the input power supply and ground connection.
5. Raise the machine to extract it from the base.

6. TROUBLESHOOTING

This chapter shows basic help for solving simple problems without intervention from Meler technical personnel.

It is very important to respect the security instructions in this manual at all times. Failure to do so may result in personal injury and/or damage to the machine or to the rest of the installation.

Warning: The melter/applicator equipment is equipped with current technology, but with certain foreseeable risks. Therefore, only allow appropriate personnel with enough training and experience to use, install or repair this equipment.



Each observed problem corresponds to a chapter section. There are four different columns in each one:

- Possible causes
- Verification to be performed
- Useful observations
- Actions

The system is simple. Locate the chapter section that corresponds to the observed problem. Starting from the column on the left, follow vertically the causes. Once the cause is found check, the action is performed taking into account the comments and once the error checked carried out in each case corrective action.

If you do not reach the cause follow to the next problem.

If you are unable to solve the problem with the help provided in this chapter, contact your Area Technical Service Center or Meler headquarter directly.

Melter

The unit does not turn on

Causes	Checking	Comments	Actions
Equipment power supply malfunction.	Check voltage between phases and neutrals in the main terminal. Check voltage in CN4 connector (power board).	Voltages will vary depending on power supply.	Check wiring. Check net power supply. Change electric supply cable.
Switch malfunction.	Check continuity in switch (1S2)	If continuity in CN7 connector, switch is OK.	Change switch.
Power board malfunction.	Check voltage in CN8 connector.	Bypass CN8 pins. If 230V, the board is correct.	Change power board.
Control board fuse damaged.	Verify continuity in fuse (F1).	Check first 230V is supplied to the control board (CN8)	Change fuse.
Control board malfunction.	Check voltage in CN9 connector.	Fuse works and 230V arrive to control board	Change control board.
Thermostat failure.	Check continuity at the thermostat with the switch turned ON.	If there is no continuity reset the thermostat by pushing the button.	Replace the thermostat if there is still no continuity.
Thermostat failure.	The thermostat triggers when reset.	There is continuity but the temperature has not dropped enough.	Wait to reset it again and check
Thermostat failure.	The thermostat triggers when reset	After waiting a bit the temperature does not drop.	Check the resistors and melter grid probe.

Equipment shortcircuit malfunction

Causes	Checking	Comments	Actions
Shortcircuit in melter grid.	Disconnect CN6 connector from the power board.	If the melter grid is shortcircuited, the system will turn on. Reconnect CN6 and release the wires from the melter grid terminal strip.	Check wiring, some cables might be bypassed. Change melter grid.
Shortcircuit in manifold.	Disconnect CN6 connector from the power board	If the distributor is shortcircuited, the system will turn on. Reconnect CN6 and release the wires from the manifold terminal strip.	Check wiring, some cables might be bypassed, broken... Change heating elements of the distributor
Hose-gun shorcircuit (1-6 output).	Disconnect the hose-connectors one by one until the unit turns on.	Later, it will have to be found out if the shortcircuit is in the hose or in the gun.	Change hose or gun.

The equipment does not automatically go into standby

Causes	Checking	Comments	Actions
Erroneous programming of the Logo relay.	Check the standby time on the Logo screen (T.ST).	Open the electric cabinet to access the Logo.	Change the programming to suit production.
Failure in the power supply.	Check that there are 24 volts of direct current at the power supply outlet.	If there are not 24 volts, the source is damaged.	Change the power supply.
Temperature OK contact damaged.	Check the continuity of the contact (contact 3-4) with the equipment with temperature OK.	Remove the green connector to check the continuity (CN1 power board). If there is no continuity the contact is damaged.	Replace the T.ST power board.
Damaged relay.	Measure the voltage at relay (A1-A2) with the temperature OK. Then check the continuity of the normally open contact.	Remove the cables to check the contact continuity. If there is continuity the relay is OK.	Replace the relay.
Logo programmable relay damaged.	With temperature OK, check the continuity at the Logo Q4 outlet.	Verify the continuity without the output cables. If there is no continuity the Logo is not working correctly.	Replace the Logo programmable relay.
External standby connector damaged.	Verify the continuity of the External standby connector on the control board.	Remove the green connector to check the continuity (CN4 control board). Connect the two terminals using something metal. If it functions properly the equipment will go into Standby.	Replace the T.ST control board.

The equipment does not come out of standby into heating

Causes	Verification action	Observations	Corrective action
Temperature OK contact damaged.	Remove the green temperature OK connector on the power board (CN1).	If when you remove the connector the equipment goes back into heating mode the connector is damaged.	Replace the power board.
External standby connector damaged.	Remove the green External standby connector on the control board (CN4).	If when you remove the connector the equipment stays in Standby mode the connector is damaged.	Replace the control board.
Logo programmable relay damaged.	Remove the green External standby connector on the control board (CN4).	If when you remove the connector the equipment goes into Standby mode the Programmable relay is damaged.	Replace the programmable relay.

The equipment does not load adhesive

Causes	Verification action	Observations	Corrective action
Lack of adhesive in the loading canister.	Check the adhesive in the canister.	--	Fill the canister with pellets.
There is no air pressure.	Check that air is reaching the inlet electrovalve.	Check if there are 6 bars of pressure.	Inject air into the system.
Loading tube obstructed.	Remove the tube and look inside it.	--	Replace the tube or clean it if possible.

Causes	Verification action	Observations	Corrective action
Temperature OK contact damaged.	With the equipment temperature OK, remove the CN1 green connector from the power board and check the continuity.	If there is continuity the connector is OK.	Replace the power board.
Load electrovalve damaged.	Manual operation of the electrovalve.	If the adhesive does not load by manually operating the electrovalve, it is damaged.	Replace the electrovalve.
Magnetic detector damaged.	With the lid closed measure the continuity between input I2 and 24 volts.	If the sensor shows continuity with the lid closed, it is OK.	Replace the magnetic sensor.

Melter grid

The melter grid does not heat

Causes	Checking	Comments	Actions
Equipment power supply malfunction.	Check voltage between phases and neutrals.Check voltage in CN4 connector (power board).	Voltages will vary depending on power supply.	Check wiring. Check electrical net. Change electric supply cable.
Ribbon cable malfunction.	Check ribbon cable (CN11).	Check the connections between the cable and the board.	Change ribbon cable.
Melter grid fuse blown.	Check fuse continuity (F01).	Release the fuse to check it out with the system turned off.	Change fuse.
Power board damaged.	Check CN6 connector voltage (pins 2 and 4).	Correct if voltage is around 230V and DL2 is on.	Check wiring, it might be wrong positioned. Change board.
Power supply wire to the melter grid damaged.	Check CN6 connector voltage (pins 2 and 4) and in the melter grid terminal strip.	If connector voltage is around 230V and the cercamic terminal strip does not, the wire is damaged.	Check connections to the connector and terminal strip. Change wire.
Thermostat damaged.	Check continuity in B2.	There must be voltage in the ceramic terminal strip.	Change thermostat.
Heating element shortcircuited or blown.	Check voltage in the terminal strip.	Correct if voltage equals to 230V.	Change melter grid.

The melter grid does not stop heating

Causes	Checking	Comments	Actions
Power board malfunction.	Check power board (pins 2 and 4 in CN6).	LED indicator (DL2) remains off.	Change power board.
Control board malfunction.	Check control board.	LED indicator (DL2) remains on.	Change control board.

Temperature fluctuations in the melter grid

Causes	Checking	Comments	Actions
Temperature sensor malfunction.	Check the sensor resistance (Pt-100 or Ni-120) with polimeter.	Check the CN1 connector (sensor board) and the two upper wires status.	Change connector. Change sensor.
Sensor wrong positioned.	Check the sensor position inside its housing.	Sensor must be introduced to the bottom.	Introduce sensor to the bottom.
Sensor board malfunction.	Last failure option.	Check first sensors, connections and wirings.	Change sensor board.

Manifold

The manifold does not heat

Causes	Checking	Comments	Actions
Equipment power supply malfunction.	Check voltage between phases and neutrals.Check voltage in CN4 connector.	Voltages will vary depending on power supply.	Check wiring. Check net power supply. Change electric supply cable.
Ribbon cable malfunction.	Check ribbon cable (CN11).	Check the connections between the cable and the board.	Change ribbon cable.
Manifold fuse blown.	Check fuse continuity (F02 in CN6).	Release the fuse to check it out with the system turned off.	Change fuse.
Power board damaged.	Check voltage in the CN6 connector (pins 1 and 3).	Correct if voltage is around 230V and DL1 is on.	Check connector wiring, position. Change board.
Power supply wire to the melter grid damaged.	Check voltage in the CN6 connector (pins 1 and 3) and in the manifold terminal strip.	If voltage around 230V in the connector, but not in the terminal strip, the wire is damaged.	Check connections between the connector and the terminal strip. Change wire.
Fuse shortcircuited or blown.	Check voltage in the terminal strip.	Voltage should be around 230V.	Change heating elements.

The manifold does not stop heating

Causes	Checking	Comments	Actions
Power board malfunction.	Check the power board.	LED indicator (DL1) remains off.	Change power board.
Control board malfunction.	Check the control board.	LED indicator (DL1) remains on.	Change control board.

Temperature fluctuations in the manifold

Causes	Checking	Comments	Actions
Temperature sensor malfunction.	Check the sensor resistance (Pt-100 or Ni-120) with polimeter.	Check CN1 connector (sensor board) and the two bottom wires status.	Change connector. Change sensor.
Sensor wrong positioned.	Check the sensor position inside its housing.	Sensor must be introduced to the bottom.	Introduce sensor to the bottom.
Sensor board malfunction.	Last failure option.	Check first sensors, connections and wirings.	Change sensor board.

Pump

The pump does not pump

Causes	Checking	Comments	Actions
No adhesive in the melter grid.	Check the hot-melt level in the melter grid.	Pump shaft moves fast in both directions.	Refill melter grid with adhesive.
Melter grid filter dirty.	Check the filter and clean the bottom of the melter grid.	Bottom of the melter grid dirt impregnated.	Change or clean filter.
Shaft malfunction.	Check if adhesive returns through the FOI o-rings to the melter grid. (system under pressure).	Fast pumping but without having a continuous adhesive output.	Change shaft.
Intake valve malfunction.	Check if there are bubbles at the valve area due to adhesive return (system under pressure).	Fast pumping in one direction and without having a continuous adhesive output.	Change intake valve.
Depressurization valve malfunction.	Check if adhesive returns through the valve (system under pressure).	Fast pumping in one direction and without having a continuous adhesive output.	Change depressurization valve.
Pump blocked.	Try to manually move the shaft.	Try to move it when shaft warm.	Clean or change pump.

Pneumatic unit

Pneumatic unit malfunction

Causes	Checking	Comments	Actions
No air pressure.	Check the pressure in the regulator and net pressure.	If no pressure, the manometer will show zero bars.	Change pressure regulator.
Intake solenoid valve damaged.	Check solenoid valve and voltage in the board (CN2) is 230V (power board).	Check the equipment manually to verify if it works (position 1).	Change solenoid valve.
Power board malfunction.	Check if voltage in CN2 is 230V.	If voltage, card is OK.	Change power board.
Differential valve.	Replace the valve and try the pneumatic unit again.	The pneumatic unit does not move from one side to the other.	Change differential valve.

Causes	Checking	Comments	Actions
Air leakage.	Put the pressure at 6 bars.	Any element may leak	Change fittings, valves...
Complete pneumatic unit.	Release the pneumatic unit.	The pneumatic unit does not move.	Change complete pneumatic unit.

Adhesive leaks

Causes	Checking	Comments	Actions
Pump shaft leaks	Put the system (melter + hose + gun) under pressure.	Plain bearings worn.	Change shaft completely.
Relief valve leaks.	Put the system (melter + hose + gun) under pressure.	The manifold hole is full of adhesive.	Change relief valve.
Manifold plug leaks.	Put the system (melter + hose + gun) under pressure.	Dripping below the manifold.	Change plug o-ring and retighten it. Thread might be damaged.
Leaks between pump and melter grid.	Put the system (melter + hose + gun) under pressure.	Dripping at the pump.	Change o-rings in both parts.
Hose fitting leaks.	Put the system (melter + hose + gun) under pressure.	Dripping by external part of the manifold.	Change fitting o-ring and retighten it. Thread might be damaged.

Hose

Hose does not heat

Causes	Checking	Comments	Actions
Hose damaged.	Replace the hose by another one that works.	Change hose channel.	Change hose.
Pins and wiring damaged.	Check voltage between board and hose-output connector (with the hose plugged).	CN* connector (black wire-neutral and blue wire-hose M*) [1]	Change connectors.
Ribbon cable wrong placed.	Observe ribbon cable connection.	Ribbon cable correct if red LED light on (DL15).	Put ribbon cable correctly.
Power board fuse damaged.	Verify fuse continuity. [2]	Check continuity with the unit turned off.	Change fuse.
Power board damaged.	Check voltage at the board output (with the hose plugged).	CN* board connector (black wire-neutral and blue wire-hose M*). Fuse shows continuity. DL* LED light remains on. [3]	Change power board.

Hose does not stop heating

Causes	Checking	Comments	Actions
Power board damaged.	Check power board.	DL* LED green indicator is continuously off. [4]	Change power board.
Control board damaged.	--	DL* LED green indicator is continuously on. [4]	Change control board.

Temperature fluctuations in hose

Causes	Checking	Comments	Actions
Hose temperature sensor malfunction.	Replace the hose by another one that works.	Change hose channel.	Change hose.
Sensor wiring.	Check sensor board and hose connector.	CN* sensor board connector (black and green wire). [5]	Change connector.
Sensor board malfunction.	Last failure option.	Check first sensors, connections and wirings.	Change the sensor board.

Note	Hose 1	Hose 2	Hose 3	Hose 4	Hose 5	Hose 6
(1)	CN9 / M1	CN9 / M2	CN10 / M3	CN10 / M4	CN11 / M5	CN11 / M6
(2)	F04	F05	F06	F07	F08	F09
(3)	CN9 / M1 / DL3	CN9 / M2 / DL5	CN10 / M3 / DL7	CN10 / M4 / DL9	CN11/ M5 /DL11	CN11/ M6 /DL13
(4)	DL3	DL5	DL7	DL9	DL11	DL13
(5)	CN2	CN3	CN4	CN5	CN6	CN7

Gun

Gun does not heat

Causes	Checking	Comments	Actions
Gun damaged.	Replace the gun by another one that works.	Change gun channel.	Change gun.
Hose damaged.	Replace the hose by another one that works.	Change hose channel.	Change hose.
Pins and wiring damaged.	Check voltage between board and gun-output connector (with the hose plugged).	CN* connector (black wire-neutral and red wire-gun P*). [1]	Change connectors.
Ribbon cable wrong placed.	Observe ribbon cable connection.	Ribbon cable correct if red LED light on (DL15).	Put ribbon cable correctly.
Power board fuse damaged.	Verify fuse continuity. [2]	Check continuity with the unit turned off.	Change fuse.
Power board damaged.	Check voltage at the board output (with the hose plugged).	CN* board connector (black wire-neutral and red wire-gun P*). Fuse shows continuity. DL* LED light remains on. [3]	Change power board.

Gun does not stop heating

Causes	Checking	Comments	Actions
Power board damaged.	Check power board.	DL* LED green indicator is continuously off. [4]	Change power board.
Control board damaged.	--	DL* LED green indicator is continuously on. [4]	Change control board.

Temperature fluctuations in gun

Causes	Checking	Comments	Actions
Gun temperature sensor malfunction.	Replace the gun by another one that works.	Change gun channel.	Change gun.
Sensor wiring.	Check sensor board and gun connector.	CN* sensor board connector (black and blue wire). [5]	Change connector.
Sensor board malfunction.	Last failure option.	Check first sensors, connections and wirings.	Change the sensor board.

Note	Gun 1	Gun 2	Gun 3	Gun 4	Gun 5	Gun 6
(1)	CN9 / P1	CN9 / P2	CN10 / P3	CN10 / P4	CN11 / P5	CN11 / P6
(2)	F04	F05	F06	F07	F08	F09
(3)	CN9 / P1 / DL4	CN9 / P2 / DL6	CN10 / P3 / DL8	CN10/ P4 /DL10	CN11/ P5 /DL12	CN11/ P6 /DL14
(4)	DL4	DL6	DL7	DL10	DL12	DL14
(5)	CN2	CN3	CN4	CN5	CN6	CN7

This page is intentionally left blank.

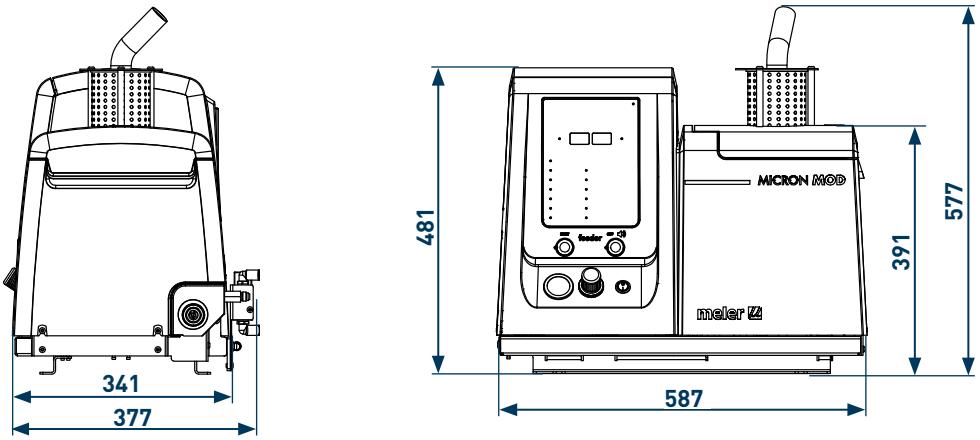
7. TECHNICAL CHARACTERISTICS

Generals

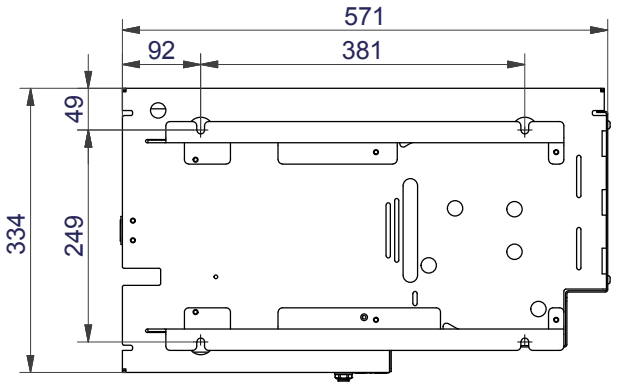
Volumen de reserva	1,21 liters
Pumping rate	29,3 kg/h 7cc/stroke pump **(*)**
Melting rate	15.5 kg/h **(*)**
Number of outputs	2, 4 or 6 (thread 9/16)
Temperature range	40 to 200°C (100 to 392°F)
Temperature control	RTD ±0.5°C (±1°F)
	Pt-100 or Ni-120
Max. working pressure (at 6 bar)	81,6 bar (1183 psi)
Max. installation power (at 230V)	4.920W (2 outputs)
	7.320W (4 outputs)
	9.720W (6 outputs)
External requirements	Temperature ok output
	Outputs disabled external control
Electrical requirements	LN ~ 230V 50Hz + PE
	3N ~ 400/230V 50Hz + PE
Workplace temperature	0 to 40°C
Dimensions (L x A x H)	587 x 377 x 577 mm
Weight	47 kg (without automatic feeder system)
Options	Low level warning light
	Pressure regulator VP-200

(*) Depending on the type of adhesive

Dimensions



Mounting the equipment



Options

Warning light option

The adhesive level is controlled using a capacitive sensor which triggers an alarm signal via a warning light.

VP option

The pressure regulator VP-200 allows the automatic control of working air pressure of the equipments with piston pump. Thus, when the main machine changes its speed, it is possible to guarantee the same application pattern, adjusting the adhesive flow.

8. ELECTRICAL DRAWINGS

meler GLUING SOLUTIONS

Poligono industrial Los Agustinos C/G Nave D-43
31160 Orcoyen (Navarra)
Phone. +34 948 35 11 10

Company / customer	
Project description	MICRON MOD PT 100
Job number	E00300071
Commission	
Manufacturer (company)	MELER
Path	Pages and devices, sequential numbering
Project name	E00300071
Make	
Type	
Place of installation	
Responsible for project	JOSE A PEREZ
Part feature	

Created on 23/04/2015
Edit date 23/04/2015 by (short name) JAPEREZ Number of pages 11

2A0

POWER BOARD

MAIN POWER SUPPLY | 220 VAC | ON/OFF | LOW LEVEL | HOT-MELT LEVEL | Tª OK | PISTON | TANK HEADER | CHANNEL 1 & 2 | CHANNEL 3 & 4 | CHANNEL 5 & 6

CN4 1 2 3 4 5 6 | CN8 1 2 | CN7 1 2 | CN5 1 2 | CN1 1 2 3 4 | CN2 1 2 | CN6 1 2 3 4 | CN9 1 2 3 4 5 6 | CN10 1 2 3 4 5 6 | CN11 1 2 3 4 5 6 | CN3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

2W6 4.5

CN3-1 4.5 | CN3-2 4.5 | CN3-3 4.5 | CN3-4 4.5 | CN3-5 4.5 | CN3-6 4.5 | CN3-7 4.6 | CN3-8 4.6 | CN3-9 4.6 | CN3-10 4.6 | CN3-11 4.6 | CN3-12 4.6 | CN3-13 4.6 | CN3-14 4.6 | CN3-15 4.6 | CN3-16 4.6 | CN3-17 4.6 | CN3-18 4.6 | CN3-19 4.7 | CN3-20 4.7 | CN3-21 4.7 | CN3-22 4.7 | CN3-23 4.7 | CN3-24 4.7 | CN3-25 4.7 | CN3-26 4.7

F1 2,5

F2 2.5

F3 2.5

N 2.5

2W1 4.3

G2 8.7 | G1 8.7

N / 5.0

8.7 / T1

8.7 / T2

T-OK / 5.7

+24V / 6.7

220 VAC-1 / 4.0

220 VAC-2 / 4.0

2S1 1A 2A 1B 2B

F1.1 / 5.0

PE

PE / 3.0

XA 1 2 3 4 1

U1 1

2Y3 x2 x1

PUMP

2E4 300 W | 2E4.1 300 W | 2E4.2 160 W | 2E5 160 W

MANIFOLD

P6 / 3.0
C6 / 3.0
M6 / 3.0
P5 / 3.0
C5 / 3.0
M5 / 3.0

P4 / 3.0
C4 / 3.0
M4 / 3.0
P3 / 3.0
C3 / 3.0
M3 / 3.0

P2 / 3.0
C2 / 3.0
M2 / 3.0
P1 / 3.0
C1 / 3.0
M1 / 3.0

1 3

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

Denomination: POWER CIRCUIT WIRING

Equipment: MICRON MOD PT 100

Revision 0 | = | +

E00300071

3A2

SENSORS BOARD

TANK | CHANNEL 1 | CHANNEL 2 | CHANNEL 3 | CHANNEL 4 | CHANNEL 5 | CHANNEL 6 | CONTROL

CN1 1 2 3 4 | CN2 1 2 3 4 | CN3 1 2 3 4 | CN4 1 2 3 4 | CN5 1 2 3 4 | CN6 1 2 3 4 | CN7 1 2 3 4 | CN8 1 2 3 4

8.7 / S1
8.7 / S2

3B0.1
x1 x2

3W7
4.4

SEN-4 / 4.0
SEN-3 / 4.0
SEN-2 / 4.0
SEN-1 / 4.0

GREEN
BROWN
BLUE
BROWN

GREEN
BROWN
BLUE
BROWN

GREEN
BROWN
BLUE
BROWN

BROWN
BLUE
BROWN
GREEN

BROWN
BLUE
BROWN
GREEN

BROWN
BLUE
BROWN
GREEN

2.9 / P1 BLUE
2.9 / C1 BLACK
2.9 / M1 RED

2.9 / P2 BLUE
2.9 / C2 BLACK
2.9 / M2 RED

2.9 / P3 BLUE
2.9 / C3 BLACK
2.9 / M3 RED

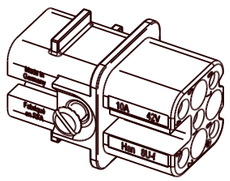
2.9 / P4 BLUE
2.9 / C4 BLACK
2.9 / M4 RED

2.9 / P5 BLUE
2.9 / C5 BLACK
2.9 / M5 RED

2.9 / P6 BLUE
2.9 / C6 BLACK
2.9 / M6 RED

2.2 / PE

3X0 = 3X0 1 2 3 4 5 6 7 PE (3.0)
3X2 = 3X2 1 2 3 4 5 6 7 PE (3.2)
3X3 = 3X3 1 2 3 4 5 6 7 PE (3.3)
3X4 = 3X4 1 2 3 4 5 6 7 PE (3.4)
3X6 = 3X6 1 2 3 4 5 6 7 PE (3.6)
3X7 = 3X7 1 2 3 4 5 6 7 PE (3.7)



meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

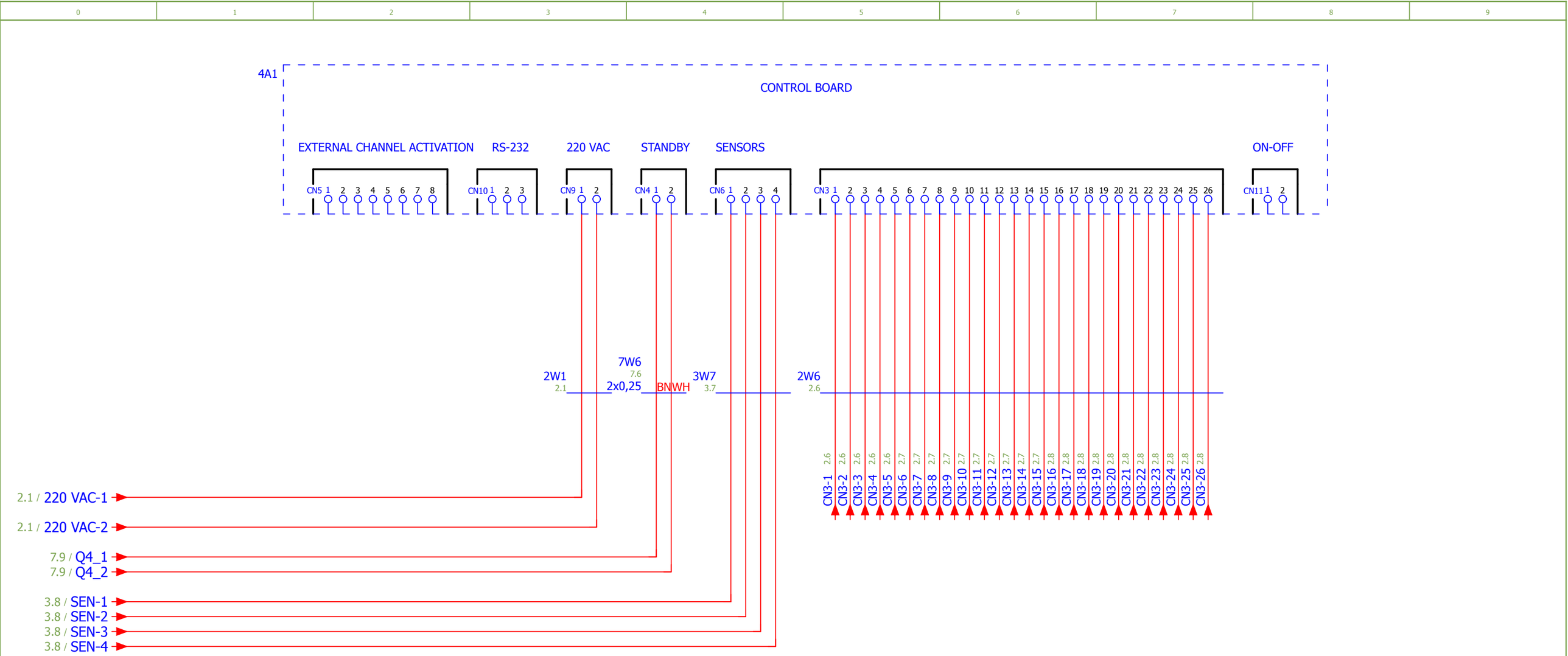
Denomination: SENSORS CIRCUIT WIRING

Equipment: MICRON MOD PT 100

Revision 0

E00300071

Page 3
Page 11



	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

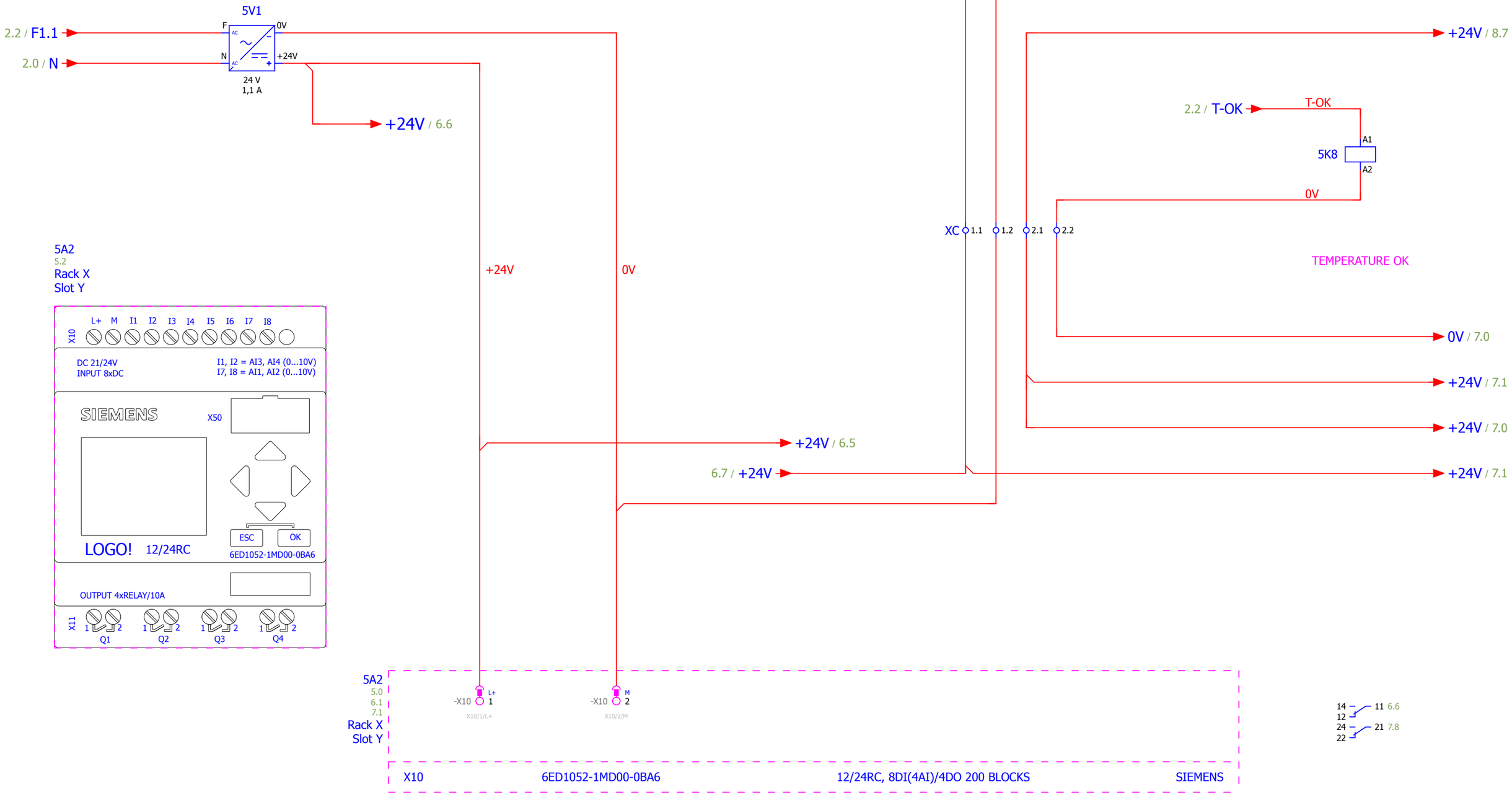
Denomination: CONTROL CIRCUIT WIRING

Equipment: MICRON MOD PT 100

Revision: 0

E00300071

Page 4 / Page 11



meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

Denomination: PLC

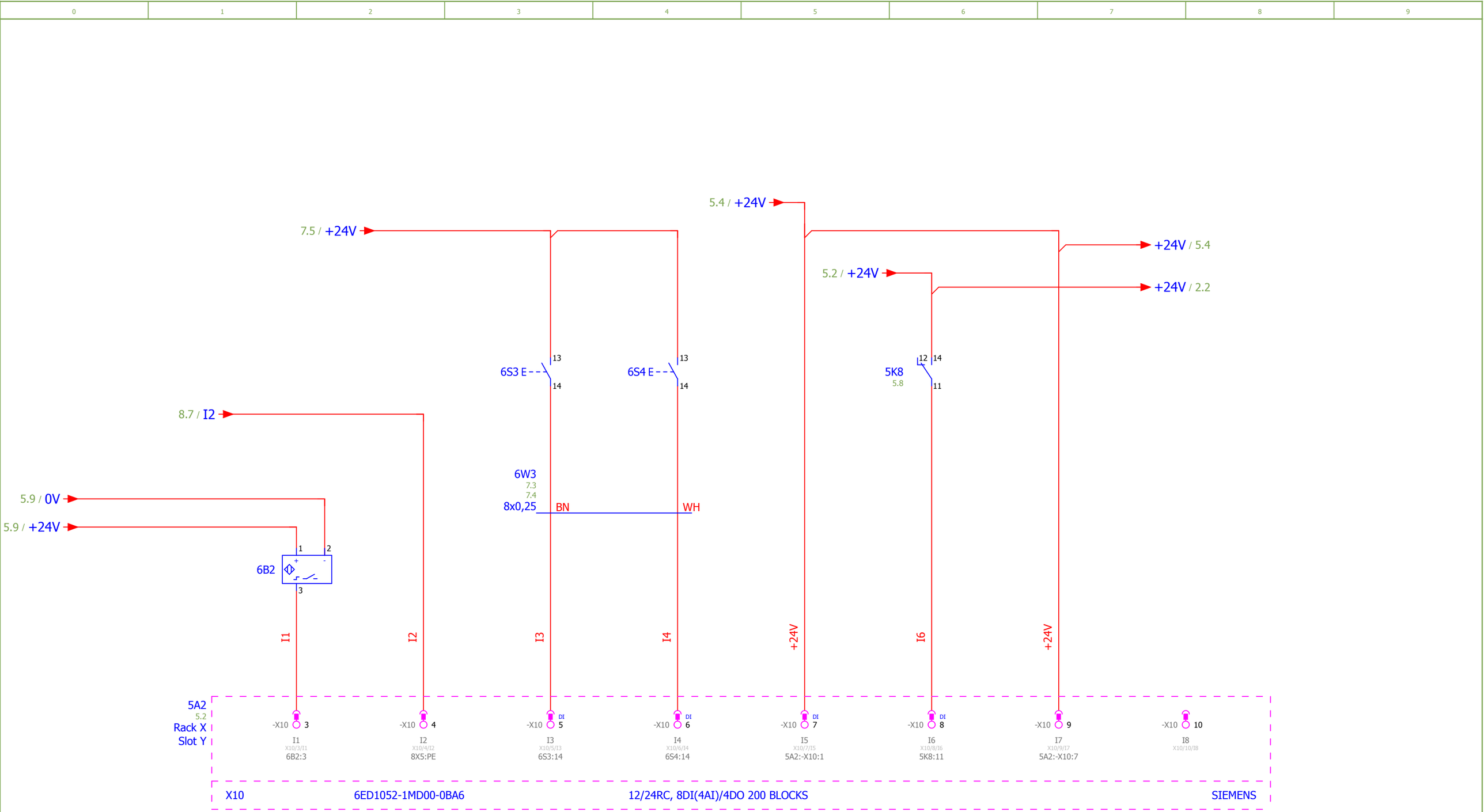
Equipment: MICRON MOD PT 100

Revision: 0

E00300071

Page 5

Page 11



5 7

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

Denomination: PLC DI

Equipment: MICRON MOD PT 100

Revision: 0

E00300071

Page 6

Page 11

TEMPERATURE OK

5A2
5.2
Rack X
Slot Y

X11 6ED1052-1MD00-0BA6 12/24RC, 8DI(4AI)/4DO 200 BLOCKS SIEMENS

X11/1/Q1_1 Q1 -X11 1 DQ1_1
X11/2/Q1_2 -X11 2 DQ1_2
X11/3/Q2_1 Q2 -X11 3 DQ2_1
X11/4/Q2_2 -X11 4 DQ2_2
X11/5/Q3_1 Q3 -X11 5 DQ3_1
X11/6/Q3_2 -X11 6 DQ3_2
X11/7/Q4_1 Q4 -X11 7 DQ4_1
X11/8/Q4_2 -X11 8 DQ4_2

7W6
4.4
2x0,25 BN WH

5.9 / 0V

Q4_2 → Q4_2 / 4.0

Q4_1 → Q4_1 / 4.0

Q1_2

Q2_2

Q3_2

6W3
6.3
8x0,25 YE

7Y2 x1 x2

7H4 x1 x2

5.9 / +24V

6W3
6.3
8x0,25 RD

5.9 / +24V → +24V / 6.2

5.9 / +24V

LOAD E.V.

RESET

7X5 = 7X5
7.4
7X5.1 =7X5.1
7.4

7H6 x1 x2

XTOK 1
TOK1
5K8
5.8
22 24
21
TOK2
2

6 8

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

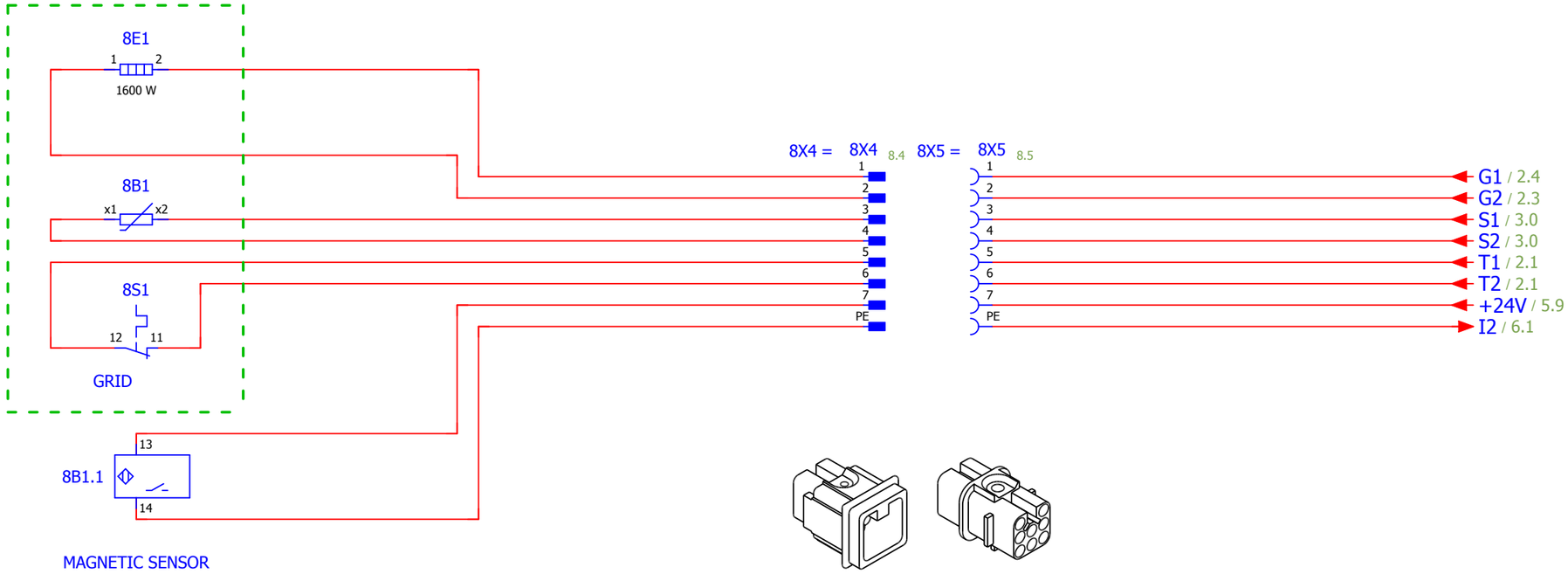
Denomination: PLC DO

Equipment: MICRON MOD PT 100

Revision 0

E00300071

Page 7
Page 11



	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

meler GLUING SOLUTIONS

Denomination: GRID

Equipment: MICRON MOD PT 100

Revision: 0

=

+

E00300071

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
2A0 2.0	1	TARJETA DE POTENCIA 6 SALIDAS RAD CORTO EQUIPO 2013		MELER	
3A2 3.2	1	TARJETA DE SONDAS MICRON V.07		MELER	
4A1 4.1	1	TARJETA DE CONTROL VERTICAL EQUIPO 2013		MELER	
5A2 5.2	1	LOGO! 12/24RC LOGO!	6ED1052-1MD00-0BA6	SIE SIE	
3B0.1 3.0	1	SONDA PT100 CON CASQUILLO Y CABLE ROJO DE 1,5m			
6B2 6.2	1	DETECTOR CAPACITIVO RECHNER 85MM Ø10 CABLE 1M+BRIDA		RECHNER	
8B1 8.1	1	SONDA PT100 CON CASQUILLO Y CABLE ROJO 1m			
8B1.1 8.1	1	DETECTOR MAGNETICO POR PROXIMIDAD			
2E4 2.4	1	RESISTENCIA CARTUCHO 300W 230V 9.46 (3/8") X 177			
2E4.1 2.4	1	RESISTENCIA CARTUCHO 300W 230V Ø10x180			
2E4.2 2.4	1	RESISTENCIA CARTUCHO 160W 230V Ø10X160			
2E5 2.5	1	RESISTENCIA CARTUCHO 160W 230V Ø10X160			
8E1 8.1	1	RESISTENCIA 1600W 230V PARRILLA MICRON MOD			
7H4 7.4	1	LED AMARILLO TEEZBVB5	ZBV B5		
7H6 7.6	1	ZUMBADOR KINGSTATE KB-26 24 V	KB-26 24 V	KINGSTATE	
5K8 5.8	1	Relay, plug-in, DPDT, 5 A, mech. & LED indicator, 24 VDC OMRON G2RS 24 DC C.C.	G2R2SN24DCSNEW G2R-2-SN 24DC(S)	OMR OMR	
5K8 5.8	1	Socket (3-1), DIN rail/surface mounting, 8-pin, screw terminals (plate clamp)	P2RF08EBYOMZ P2RF-08-E	OMR OMR	
2S1 2.1	1	INTERRUPTOR ON-OFF REDONDO		ARCOLECTRIC	

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	10/11/2014
Updated	JAPEREZ	23/04/2015
Appr	R.F.	

Denomination

Lista de artículos : 404000760 - R13244AAAA

Equipment

MICRON MOD PT 100

Revision 0

=

+

E00300071

Page 9

Page 11

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
6S3 6.3	1	CONTACTO N/O	ZBE 101		
6S4 6.4	1	CONTACTO N/O	ZBE 101		
8S1 8.1	1	TERMOSTATO SEGURIDAD REARMABLE CONEX FASTON 230º	2450CM 00820670	HONEYWELL	
5V1 5.1	1	FUENTE DE ALIMENTACION 24V 1,1A CAJA CERRADA	RS-25-24	MEANWELL	
6W3 6.3	1	CABLE DATAFLEX YCY 500V 8x0,22 NEGRO			
7W6 7.6	1	CABLE APANTALLADO DATAFLEX YCY 2 X 0.25			
3X0 3.0	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
3X2 3.2	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
3X3 3.3	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
3X4 3.4	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
3X6 3.6	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
3X7 3.7	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
7X5 7.4	1	CONECTOR HEMBRA 2 PINES 620 H 02	14803180		
7X5.1 7.4	1	CONECTOR MACHO 2 PINES 620 M 02	14803190		
8X4 8.4	1	CONECTOR MACHO 8 POLOS		HAR	
8X5 8.5	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
XA 2.0	3	Feed-through terminal Feed-through terminal, 6 mm², Screw connection, Wemid, dark beige, TS 35	WDU 6 1020200000	WEI WEI	
XA 2.0	1	Feed-through terminal Feed-through terminal, 6 mm², Screw connection, Wemid, blue, TS 35	WDU 6 BL 1020280000	WEI WEI	

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
XA 2.0	1	Earth terminal Earth terminal, 6 mm², Screw connection, Wemid, green/yellow, TS 35	WPE 6 1010200000	WEI WEI	
XC 5.6	2	Multi-tier modular terminal Modular terminal, 2.5 mm², Tension clamp connection, Wemid, dark beige, TS 35	ZDK 2.5 1674300000	WEI WEI	
XTOK 7.9	1	Multi-tier modular terminal Modular terminal, 2.5 mm², Tension clamp connection, Wemid, dark beige, TS 35	ZDK 2.5 1674300000	WEI WEI	
7Y2 7.2	1	ELECTROVALVULA 2/2 24V CC 10W			

meler GLUING SOLUTIONS

Poligono industrial Los Agustinos C/G Nave D-43
31160 Orcoyen (Navarra)
Phone. +34 948 35 11 10

Company / customer	
Project description	MICRON MOD NI 120
Job number	E00300081
Commission	
Manufacturer (company)	MELER
Path	Pages and devices, sequential numbering
Project name	E00300081
Make	
Type	
Place of installation	
Responsible for project	JOSE A PEREZ
Part feature	

Created on 23/04/2015
Edit date 23/04/2015 by (short name) JAPEREZ Number of pages 11

2A0

POWER BOARD

MAIN POWER SUPPLY | 220 VAC | ON/OFF | LOW LEVEL | HOT-MELT LEVEL | Tª OK | PISTON | TANK HEADER | CHANNEL 1 & 2 | CHANNEL 3 & 4 | CHANNEL 5 & 6

CN4 1 2 3 4 5 6 | CN8 1 2 | CN7 1 2 | CN5 1 2 | CN1 1 2 3 4 | CN2 1 2 | CN6 1 2 3 4 | CN9 1 2 3 4 5 6 | CN10 1 2 3 4 5 6 | CN11 1 2 3 4 5 6 | CN3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

2W6 4.5

CN3-1 4.5 | CN3-2 4.5 | CN3-3 4.5 | CN3-4 4.5 | CN3-5 4.5 | CN3-6 4.5 | CN3-7 4.6 | CN3-8 4.6 | CN3-9 4.6 | CN3-10 4.6 | CN3-11 4.6 | CN3-12 4.6 | CN3-13 4.6 | CN3-14 4.6 | CN3-15 4.6 | CN3-16 4.6 | CN3-17 4.6 | CN3-18 4.6 | CN3-19 4.7 | CN3-20 4.7 | CN3-21 4.7 | CN3-22 4.7 | CN3-23 4.7 | CN3-24 4.7 | CN3-25 4.7 | CN3-26 4.7

F1 2,5

F2 2.5

F3 2.5

N 2.5

2W1 4.3

G2 8.7 | G1 8.7

N / 5.0

8.7 / T1

8.7 / T2

T-OK / 5.7

+24V / 6.7

220 VAC-1 / 4.0

220 VAC-2 / 4.0

2S1 1A 2A 1B 2B

F1.1 / 5.0

PE

PE / 3.0

XA 1 2 3 4 1

U1 1

2Y3 x2 x1

PUMP

2E4 300 W | 2E4.1 300 W | 2E4.2 160 W | 2E5 160 W

MANIFOLD

P6 / 3.0
C6 / 3.0
M6 / 3.0
P5 / 3.0
C5 / 3.0
M5 / 3.0

P4 / 3.0
C4 / 3.0
M4 / 3.0
P3 / 3.0
C3 / 3.0
M3 / 3.0

P2 / 3.0
C2 / 3.0
M2 / 3.0
P1 / 3.0
C1 / 3.0
M1 / 3.0

1 3

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination: POWER CIRCUIT WIRING

Equipment: MICRON MOD NI 120

Revision 0

E00300081

Page 2

Page 11

3A2

SENSORS BOARD

TANK | CHANNEL 1 | CHANNEL 2 | CHANNEL 3 | CHANNEL 4 | CHANNEL 5 | CHANNEL 6 | CONTROL

CN1 1 2 3 4 | CN2 1 2 3 4 | CN3 1 2 3 4 | CN4 1 2 3 4 | CN5 1 2 3 4 | CN6 1 2 3 4 | CN7 1 2 3 4 | CN8 1 2 3 4

8.7 / S1
8.7 / S2

3B0.1
x1 x2

3W7
4.4

SEN-4 / 4.0
SEN-3 / 4.0
SEN-2 / 4.0
SEN-1 / 4.0

GREEN
BROWN
BLUE
BROWN

GREEN
BROWN
BLUE
BROWN

BLUE
BROWN

BROWN
GREEN

BROWN
BLUE
BROWN
GREEN

BROWN
BLUE
BROWN
GREEN

BROWN
BLUE
BROWN
GREEN

2.9 / M1 RED
2.9 / C1 BLACK
2.9 / P1 BLUE

2.9 / M2 RED
2.9 / C2 BLACK
2.9 / P2 BLUE

2.9 / M3 RED
2.9 / C3 BLACK
2.9 / P3 BLUE

2.9 / M4 RED
2.9 / C4 BLACK
2.9 / P4 BLUE

2.9 / M5 RED
2.9 / C5 BLACK
2.9 / P5 BLUE

2.9 / M6 RED
2.9 / C6 BLACK
2.9 / P6 BLUE

2.2 / PE

3X0 = 3X0 1 2 3 4 5 6 7 8 9 10 11 12
3.0

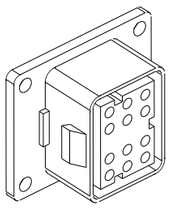
3X2 = 3X2 1 2 3 4 5 6 7 8 9 10 11 12
3.2

3X3 = 3X3 1 2 3 4 5 6 7 8 9 10 11 12
3.3

3X5 = 3X5 1 2 3 4 5 6 7 8 9 10 11 12
3.5

3X6 = 3X6 1 2 3 4 5 6 7 8 9 10 11 12
3.6

3X8 = 3X8 1 2 3 4 5 6 7 8 9 10 11 12
3.8



2

4

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination: SENSORS CIRCUIT WIRING

Equipment: MICRON MOD NI 120

Revision 0

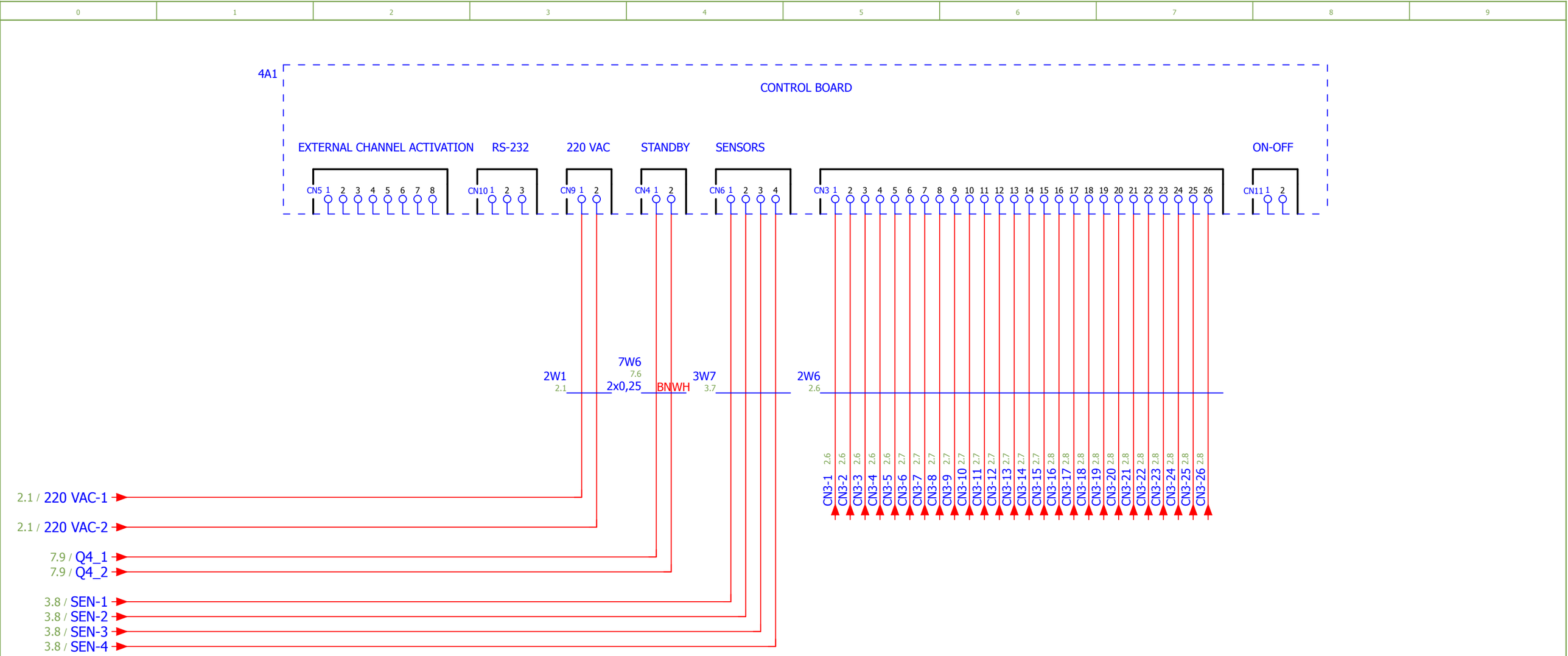
=

+

E00300081

Page 3

Page 11



meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination: CONTROL CIRCUIT WIRING

Equipment: MICRON MOD NI 120

Revision: 0

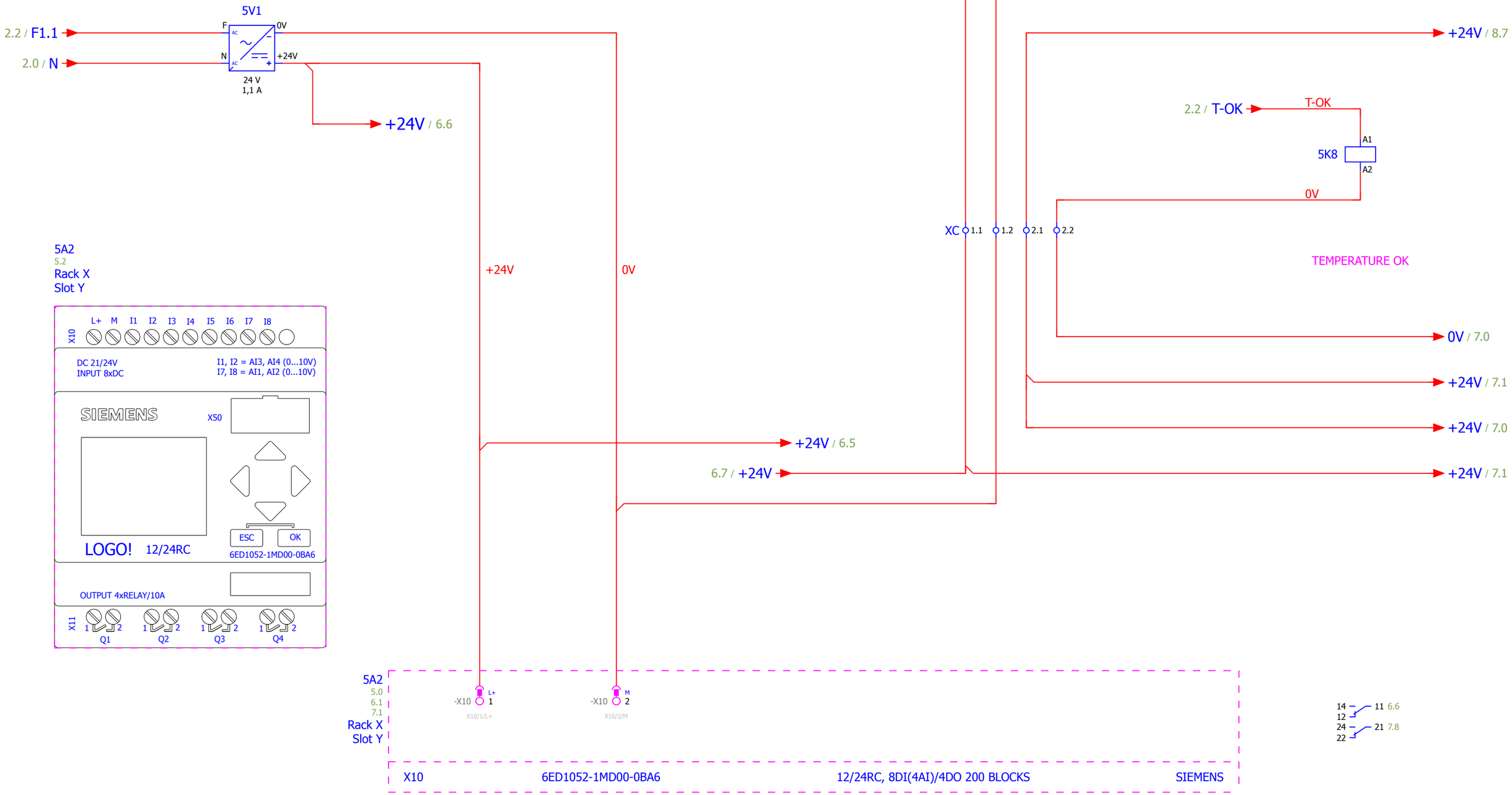
=

+

E00300081

Page 4

Page 11



meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination: PLC

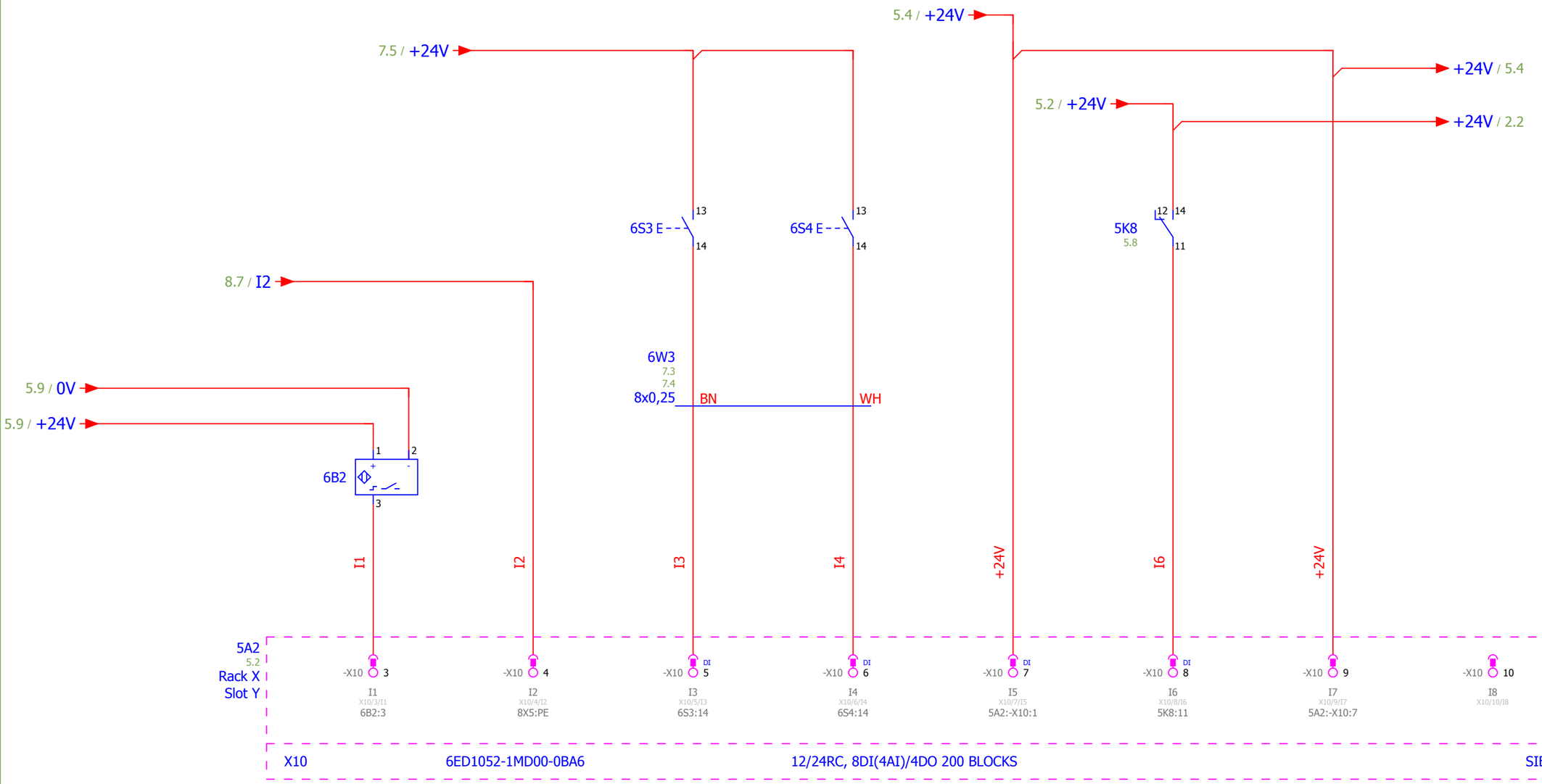
Equipment: MICRON MOD NI 120

Revision: 0

E00300081

Page 5

Page 11



5

7

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination: PLC DI

Equipment: MICRON MOD NI 120

Revision: 0

E00300081

Page 6

Page 11

TEMPERATURE OK

5A2
5.2
Rack X
Slot Y

X11 6ED1052-1MD00-0BA6 12/24RC, 8DI(4AI)/4DO 200 BLOCKS SIEMENS

X11/1/Q1_1 Q1 -X11 1 DQ1_1
X11/2/Q1_2 -X11 2 DQ1_2
X11/3/Q2_1 Q2 -X11 3 DQ2_1
X11/4/Q2_2 -X11 4 DQ2_2
X11/5/Q3_1 Q3 -X11 5 DQ3_1
X11/6/Q3_2 -X11 6 DQ3_2
X11/7/Q4_1 Q4 -X11 7 DQ4_1
X11/8/Q4_2 -X11 8 DQ4_2

7W6
4.4
2x0,25 BN WH

5.9 / 0V

Q4_2 → Q4_2 / 4.0

Q4_1 → Q4_1 / 4.0

Q1_2

Q2_2

Q3_2

6W3
6.3
8x0,25 YE

7Y2 x1 x2

7H4 x1 x2

5.9 / +24V

6W3
6.3
8x0,25 RD

5.9 / +24V → +24V / 6.2

5.9 / +24V

LOAD E.V.

RESET

7X5 = 7X5
7.4
7X5.1 =7X5.1
7.4

7H6 x1 x2

XTOK 1
TOK1
5K8
5.8
22 24
21
TOK2 2

6 8

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

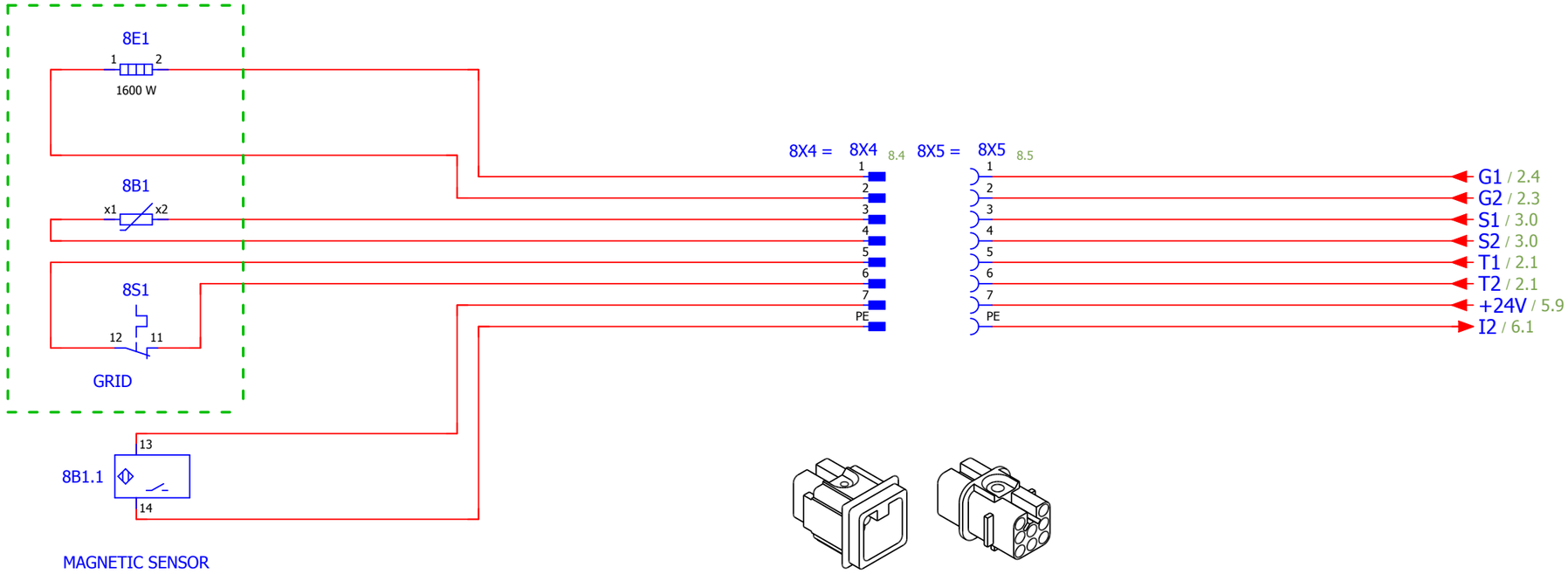
Denomination: PLC DO

Equipment: MICRON MOD NI 120

Revision 0

E00300081

Page 7
Page 11



	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

meler GLUING SOLUTIONS

Denomination: GRID

Equipment: MICRON MOD NI 120

Revision 0

E00300081

Page 8

Page 11

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
2A0 2.0	1	TARJETA DE POTENCIA 6 SALIDAS RAD CORTO EQUIPO 2013		MELER	
3A2 3.2	1	TARJETA DE SONDAS MICRON V.07		MELER	
4A1 4.1	1	TARJETA DE CONTROL VERTICAL EQUIPO 2013		MELER	
5A2 5.2	1	LOGO! 12/24RC LOGO!	6ED1052-1MD00-0BA6	SIE SIE	
3B0.1 3.0	1	SONDA NI-120 CASQUILLO Ø4,8X32MM CABLE 1,5M			
6B2 6.2	1	DETECTOR CAPACITIVO RECHNER 85MM Ø10 CABLE 1M+BRIDA		RECHNER	
8B1 8.1	1	SONDA NI-120 CASQUILLO Ø4,8X32MM CABLE 1,5M			
8B1.1 8.1	1	DETECTOR MAGNETICO POR PROXIMIDAD			
2E4 2.4	1	RESISTENCIA CARTUCHO 300W 230V 9.46 (3/8") X 177			
2E4.1 2.4	1	RESISTENCIA CARTUCHO 300W 230V Ø10x180			
2E4.2 2.4	1	RESISTENCIA CARTUCHO 160W 230V Ø10X160			
2E5 2.5	1	RESISTENCIA CARTUCHO 160W 230V Ø10X160			
8E1 8.1	1	RESISTENCIA 1600W 230V PARRILLA MICRON MOD			
7H4 7.4	1	LED AMARILLO TEEZBVB5	ZBV B5		
7H6 7.6	1	ZUMBADOR KINGSTATE KB-26 24 V	KB-26 24 V	KINGSTATE	
5K8 5.8	1	Relay, plug-in, DPDT, 5 A, mech. & LED indicator, 24 VDC OMRON G2RS 24 DC C.C.	G2R2SN24DCSNEW G2R-2-SN 24DC(S)	OMR OMR	
5K8 5.8	1	Socket (3-1), DIN rail/surface mounting, 8-pin, screw terminals (plate clamp)	P2RF08EBYOMZ P2RF-08-E	OMR OMR	
2S1 2.1	1	INTERRUPTOR ON-OFF REDONDO		ARCOLECTRIC	

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination

Lista de artículos : 404000760 - R13244AAAA

Equipment

MICRON MOD NI 120

Revision 0

=

+

E00300081

Page 9

Page 11

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
6S3 6.3	1	CONTACTO N/O	ZBE 101		
6S4 6.4	1	CONTACTO N/O	ZBE 101		
8S1 8.1	1	TERMOSTATO SEGURIDAD REARMABLE CONEX FASTON 230º	2450CM 00820670	HONEYWELL	
5V1 5.1	1	FUENTE DE ALIMENTACION 24V 1,1A CAJA CERRADA	RS-25-24	MEANWELL	
6W3 6.3	1	CABLE DATAFLEX YCY 500V 8x0,22 NEGRO			
7W6 7.6	1	CABLE APANTALLADO DATAFLEX YCY 2 X 0.25			
3X0 3.0	1	CONECTOR HEMBRA 12 POLOS			
3X2 3.2	1	CONECTOR HEMBRA 12 POLOS			
3X3 3.3	1	CONECTOR HEMBRA 12 POLOS			
3X5 3.5	1	CONECTOR HEMBRA 12 POLOS			
3X6 3.6	1	CONECTOR HEMBRA 12 POLOS			
3X8 3.8	1	CONECTOR HEMBRA 12 POLOS			
7X5 7.4	1	CONECTOR HEMBRA 2 PINES 620 H 02	14803180		
7X5.1 7.4	1	CONECTOR MACHO 2 PINES 620 M 02	14803190		
8X4 8.4	1	CONECTOR MACHO 8 POLOS		HAR	
8X5 8.5	1	Female insert, Han Q 8/0	han 09 12 007 3101	HAR HAR	
XA 2.0	3	Feed-through terminal Feed-through terminal, 6 mm², Screw connection, Wemid, dark beige, TS 35	WDU 6 1020200000	WEI WEI	
XA 2.0	1	Feed-through terminal Feed-through terminal, 6 mm², Screw connection, Wemid, blue, TS 35	WDU 6 BL 1020280000	WEI WEI	

meler GLUING SOLUTIONS

	Name	Date
Ed.	JOSE A PEREZ	15/01/2015
Updated	JAPEREZ	23/04/2015
Appr	R.F.V.	

Denomination

Lista de artículos : 612000990 - WEI.1020280000

Equipment

MICRON MOD NI 120

Revision 0

=

+

E00300081

Page 9.a

Page 11

Parts list

MELER_ARTICULOS_PRODUCTO

Device tag Placement	Quantity QU	Designation	Type number Order number	Manufacturer Supplier	Pos
XA 2.0	1	Earth terminal Earth terminal, 6 mm², Screw connection, Wemid, green/yellow, TS 35	WPE 6 1010200000	WEI WEI	
XC 5.6	2	Multi-tier modular terminal Modular terminal, 2.5 mm², Tension clamp connection, Wemid, dark beige, TS 35	ZDK 2.5 1674300000	WEI WEI	
XTOK 7.9	1	Multi-tier modular terminal Modular terminal, 2.5 mm², Tension clamp connection, Wemid, dark beige, TS 35	ZDK 2.5 1674300000	WEI WEI	
7Y2 7.2	1	ELECTROVALVULA 2/2 24V CC 10W			

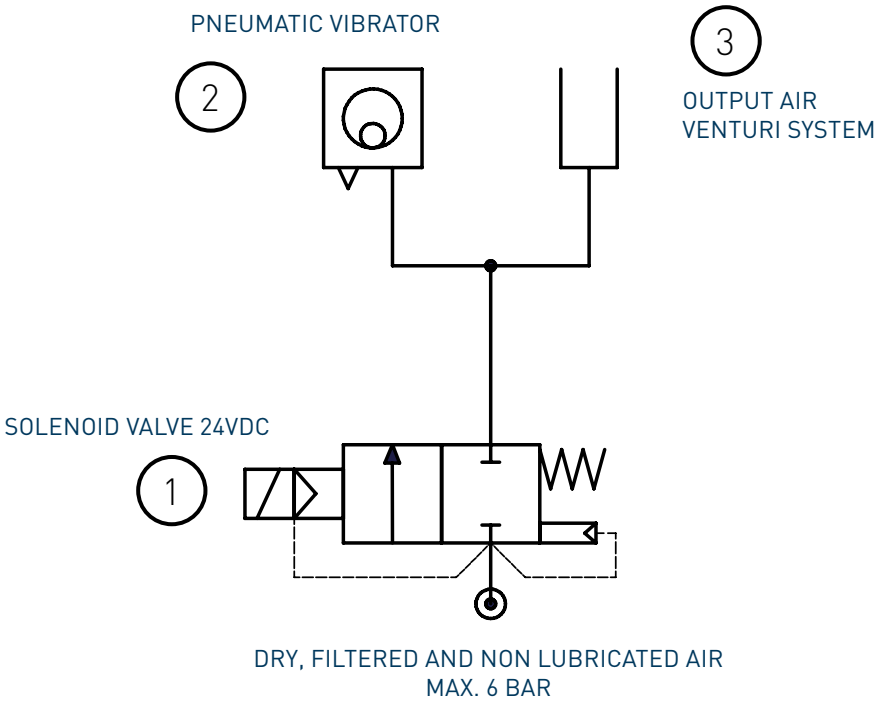
This page is intentionally left blank.

9. PNEUMATIC DIAGRAM

Electro-pneumatic diagram for automatic feeder system

Component list

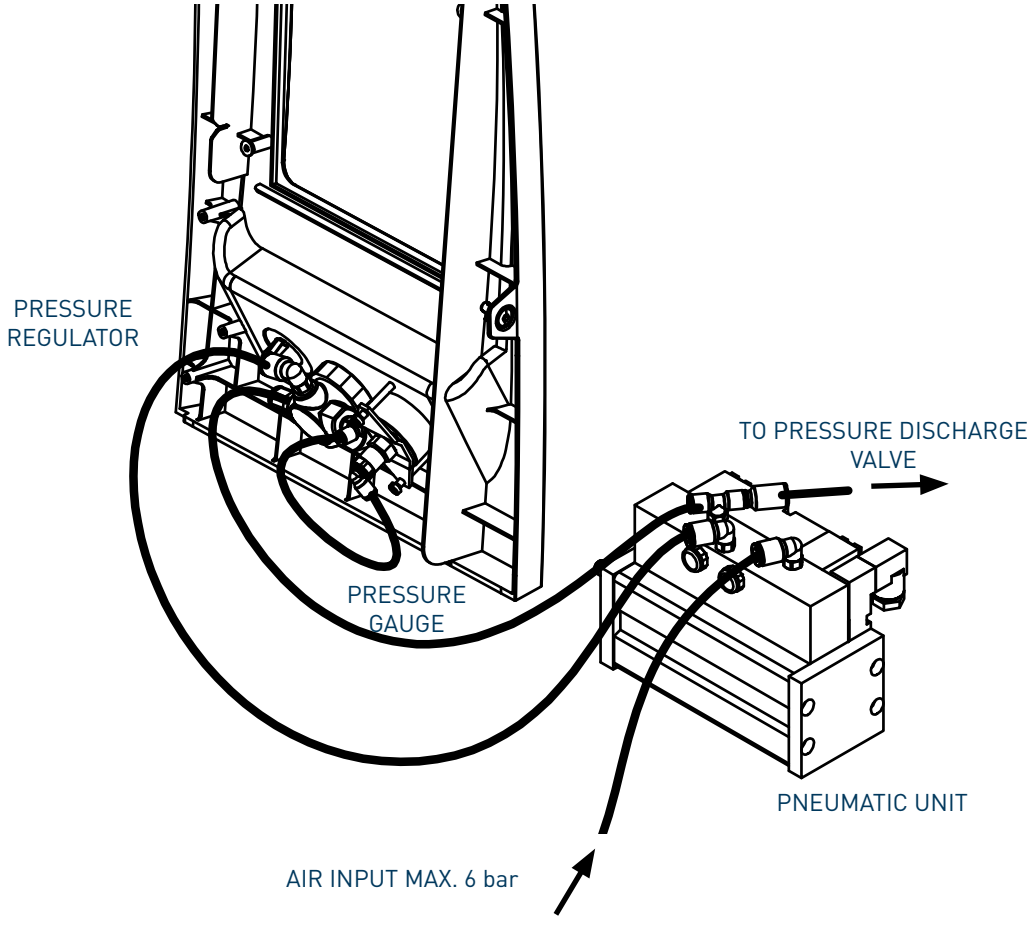
- 1 Solenoid valve 2/2. 24VDC 10W
- 2 Pneumatic vibrator
- 4 Output air. Venturi system



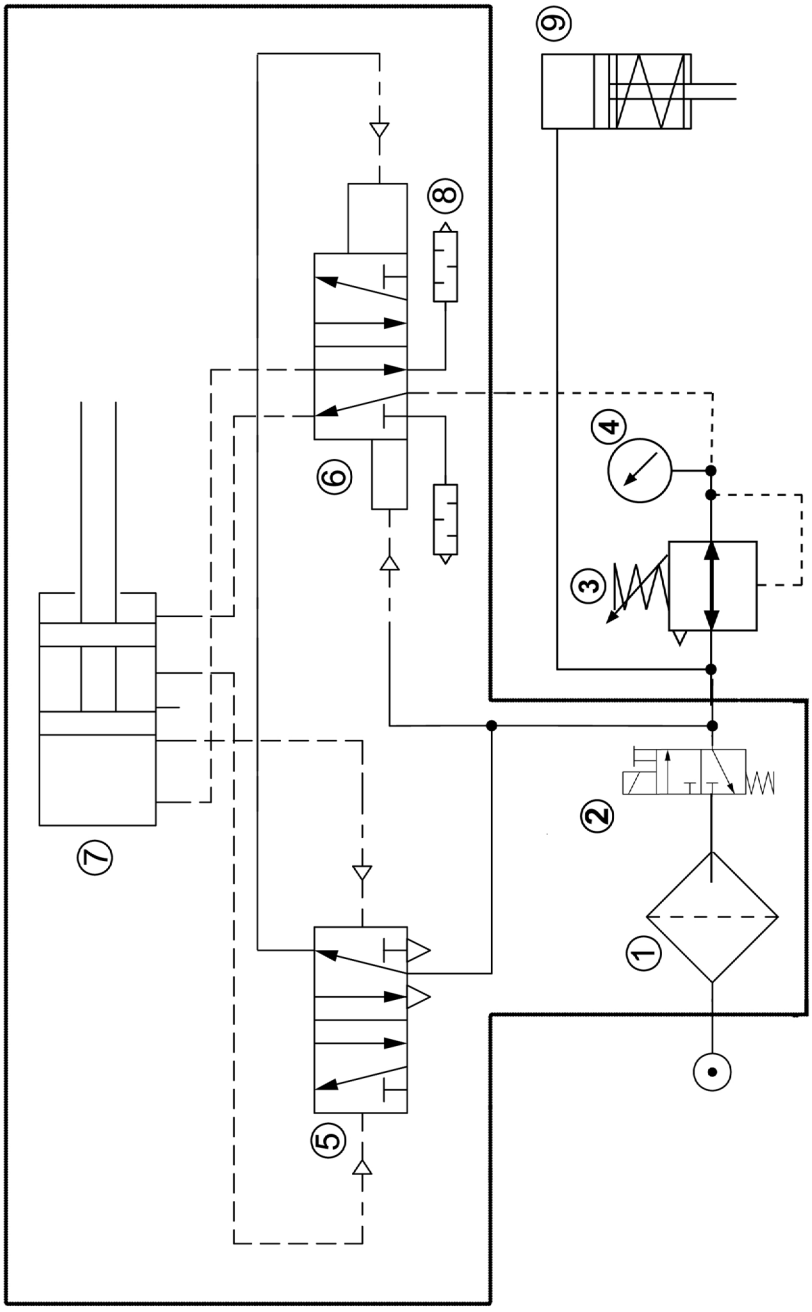
Pneumatic connection for 7 cm^3/stroke PUMP

Components list

- 1 Inlet filter (filtering disk)
- 2 Solenoid valve 3/2 manual override (230V 50 Hz 1.5VA)
- 3 Pressure regulator 1-8 bar
- 4 Pressure gauge 0-10 bar
- 5 Pneumatic valve 5/2
- 6 Differential valve
- 7 Pneumatic cylinder double acting double chamber Ø50x50 (7cm^3/stroke pump)
- 8 Exhaust port filter
- 9 Pressure discharge valve



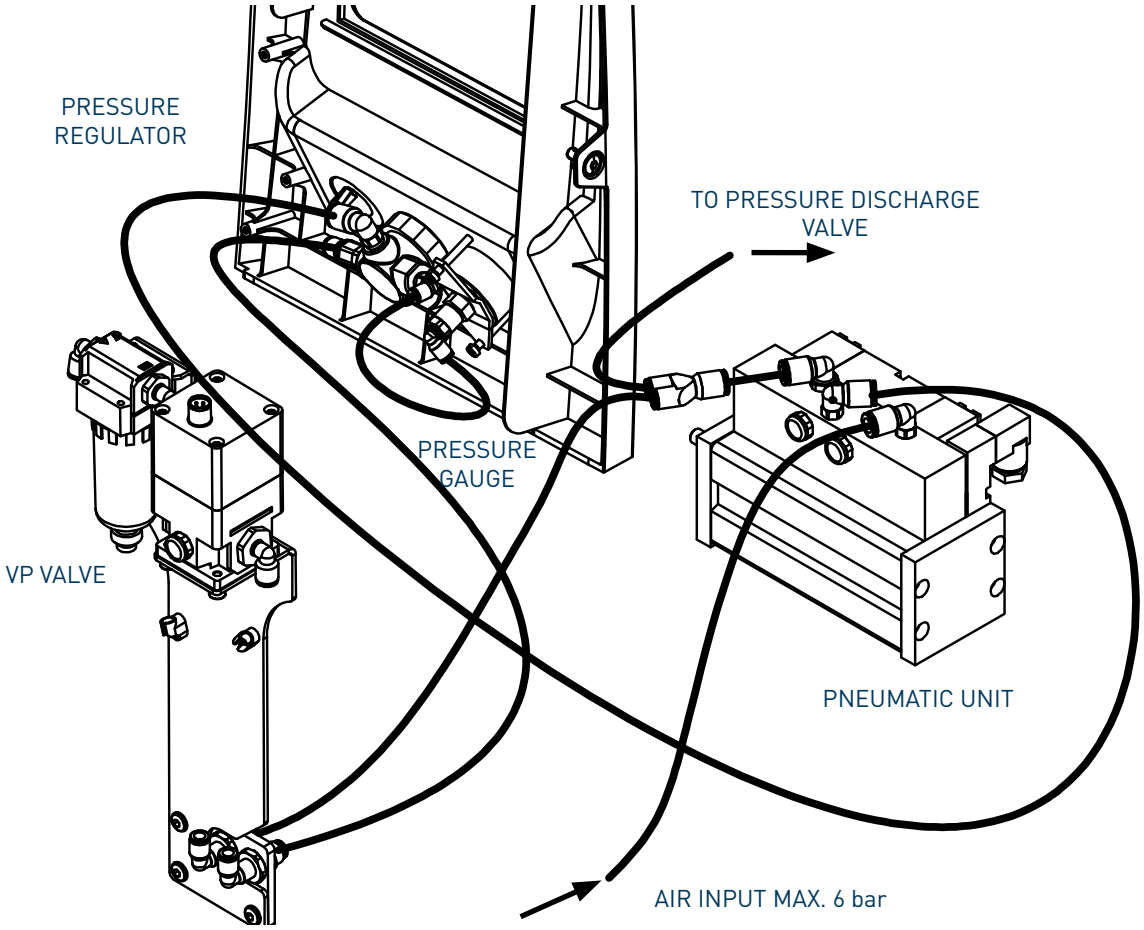
Pneumatic diagram for 7 cm^3/stroke PUMP



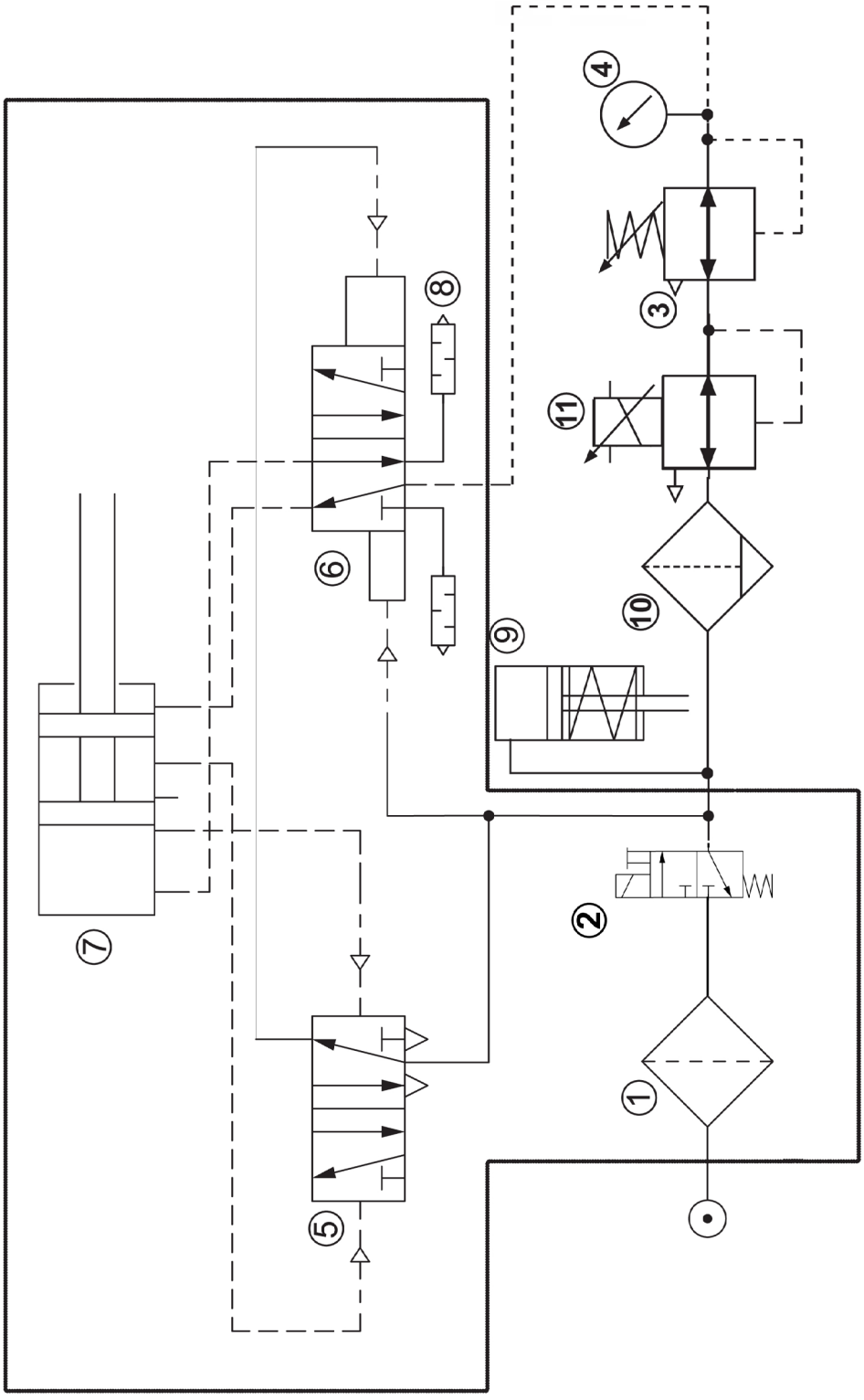
Electro-pneumatic connection with pressure regulator VP. 7 cm³/stroke PUMP

Components list

- 1 Inlet filter (filtering disk)
- 2 Solenoid valve 3/2 manual override (230V 50 Hz 1.5VA)
- 3 Pressure regulator 1-8 bar
- 4 Pressure gauge 0-10 bar
- 5 Pneumatic valve 5/2
- 6 Differential valve
- 7 Pneumatic cylinder double acting double chamber Ø50x50 (7cm³/stroke pump)
- 8 Exhaust port filter
- 9 Pressure discharge valve
- 10 Air filter 5µ
- 11 Pressure regulator (proportional valve)



Electro-pneumatic diagram with pressure regulator VP. 7 cm³/stroke PUMP



This page is intentionally left blank.

10. SPARE PARTS LIST

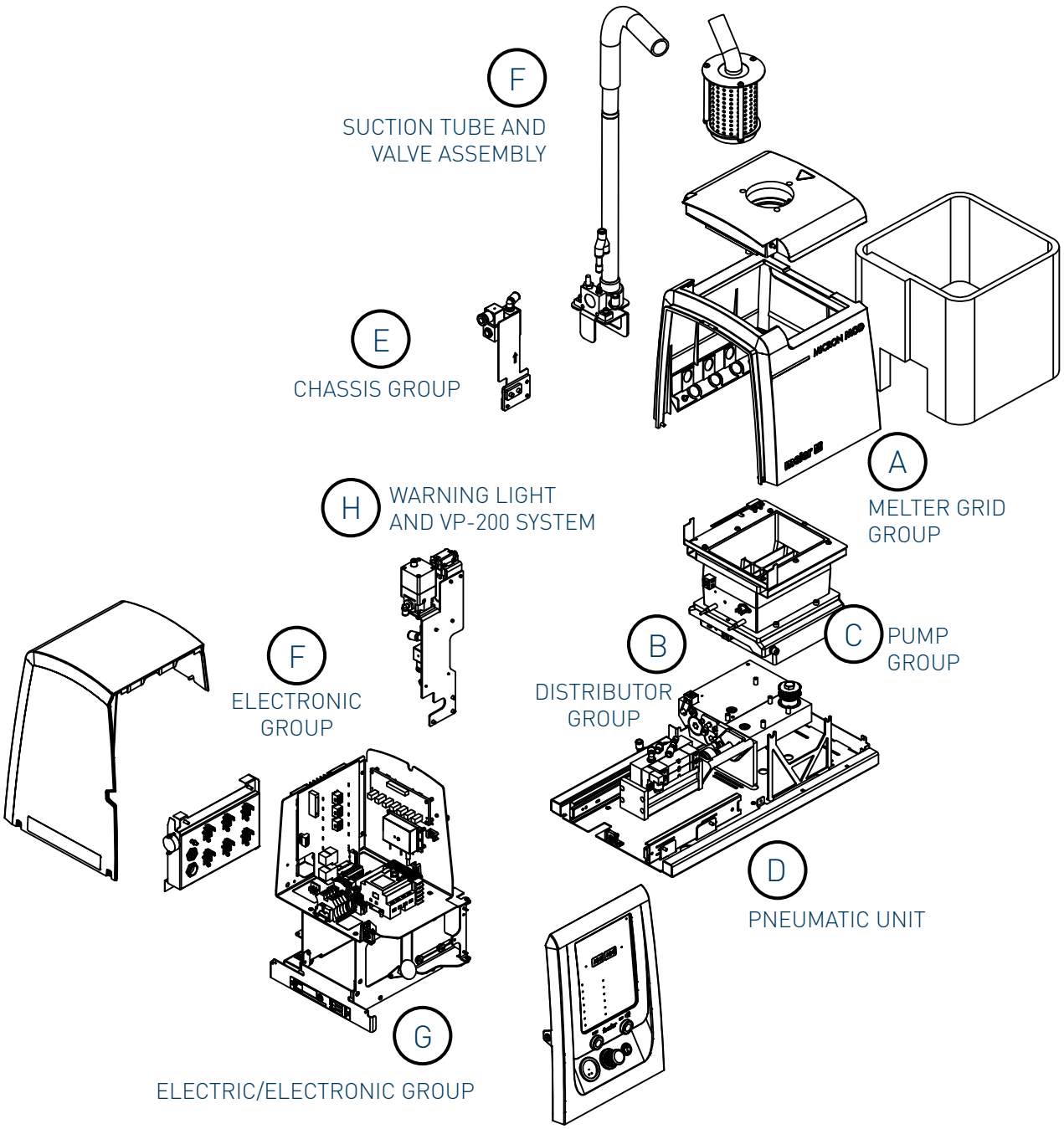
The list of the most common spare parts for Micron MOD machines appears in this section, providing a quick and reliable guide to choosing them.

The spare parts are grouped together naturally, in the same way as they are located in the melters.

As a visual aid, drawings of the parts are included and are numbered to help identify them in the list. For further information about the content of the spare parts, click on the number of the spare part.

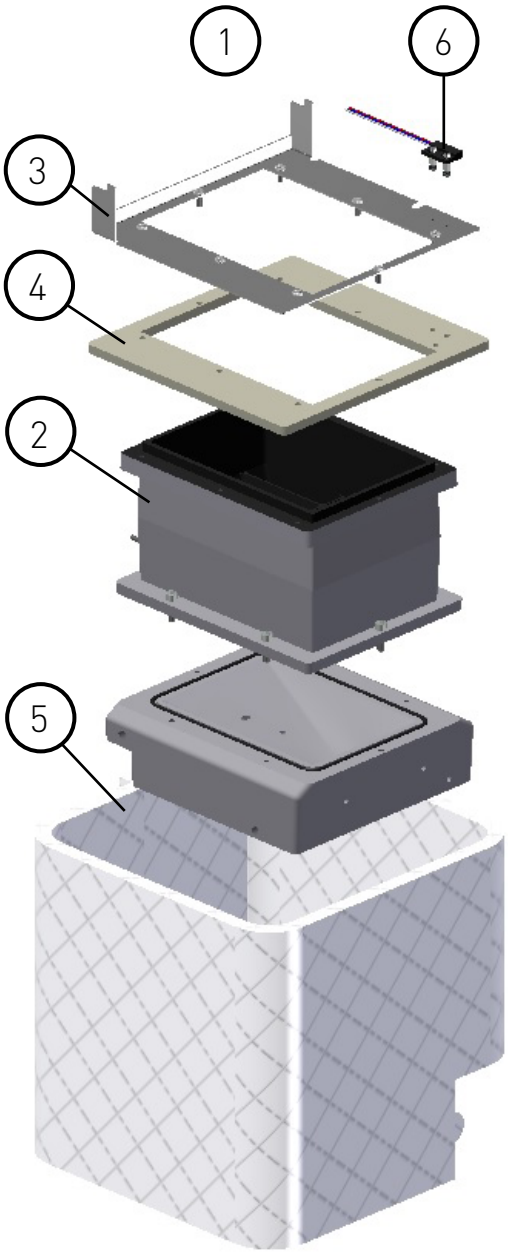


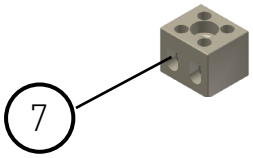
This page is intentionally left blank.


F
SUCTION TUBE AND
VALVE ASSEMBLY
E
CHASSIS GROUP
A
MELTER GRID
GROUP
H
WARNING LIGHT
AND VP-200 SYSTEM
F
ELECTRONIC
GROUP
B
DISTRIBUTOR
GROUP
C
PUMP
GROUP
D
PNEUMATIC UNIT
G
ELECTRIC/ELECTRONIC GROUP

A. TANK ASSEMBLY

Nº	Ref.	Description
1	150117000	Complete tank assembly 230V
2	150115760	PTFE coated tank 230V
3	150115780	Inlet tank
4	150115790	Insulation mantle inlet tank
5	150113410	Tank insulation mantle
6	150115770	Magnetic detector closed lid
7	10030007	Current connection strip
8	150114510	Safety thermostat, up to 230°C
9	150115890	Capacitive level sensor (amplifier and probe)
10	150022640	Tank sensor Pt100
10	150022650	Tank sensor Ni120







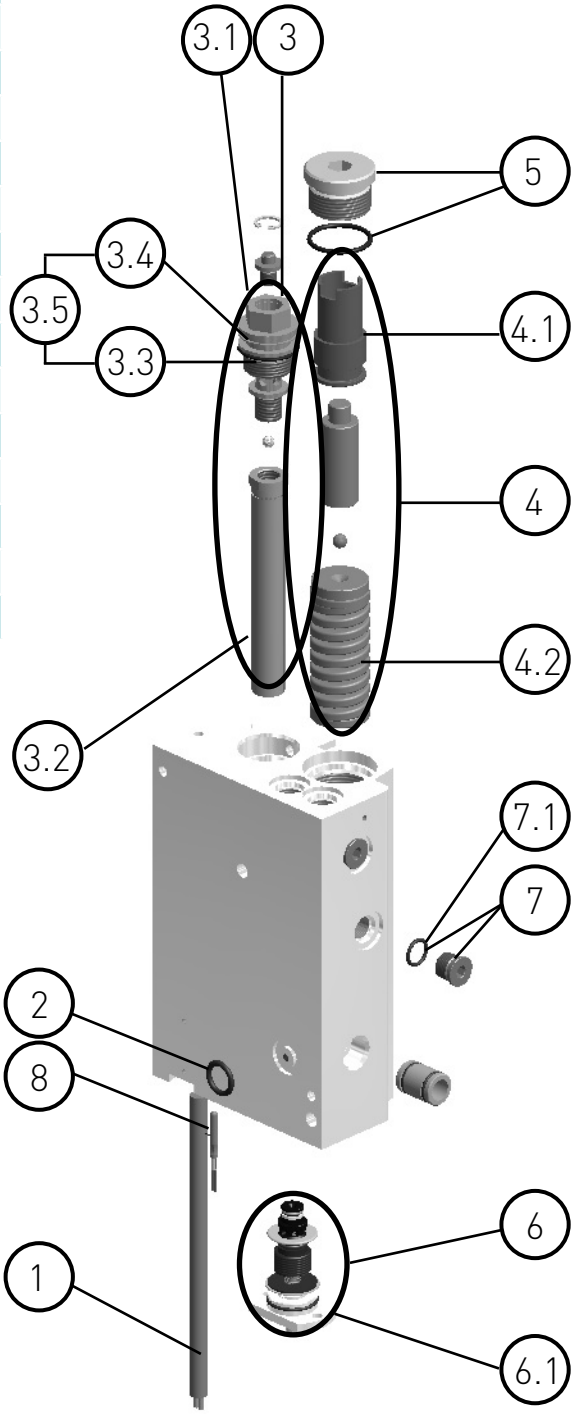


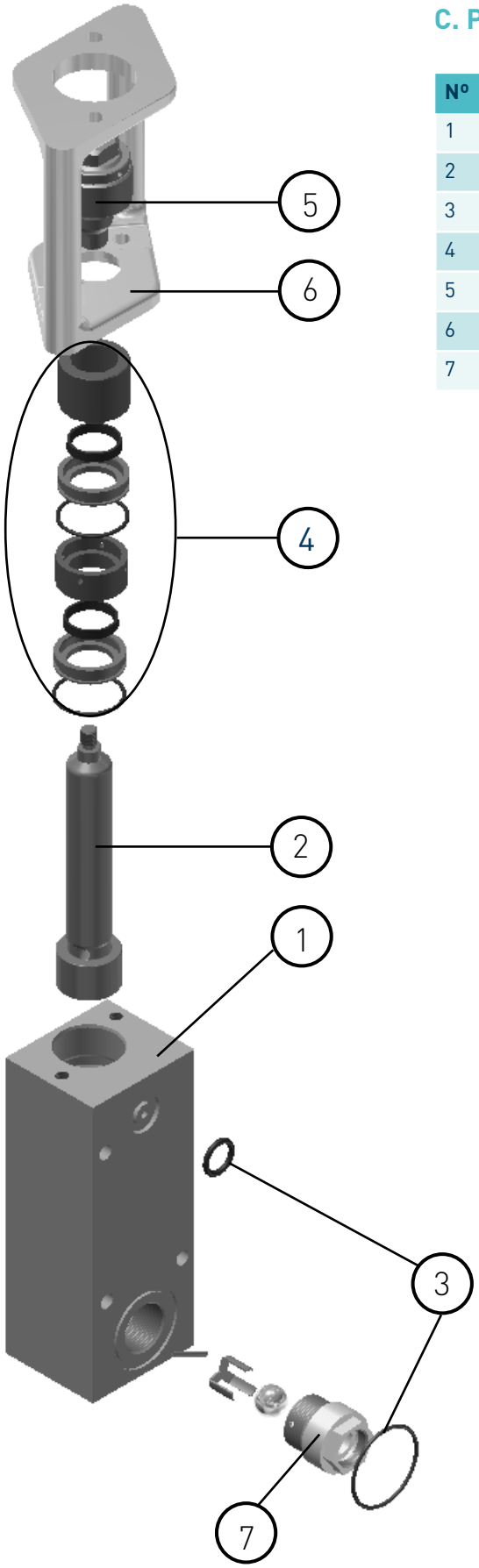




B. DISTRIBUTOR UNIT

Nº	Ref.	Description
1	150026350	Heating element 300 W
2	10120032	Tank-distributor seating o-ring
3	150113210	Distributor filter assembly
3.1	150114390	Filter head with purger
3.2	150029250	Filter mesh
3.3	150029260	O-ring 23X3
3.4	150116050	O-ring 29.87 X 1.78
3.5	150113260	O-rings filter assembly kit
4	150021820	Compensation valve assembly
4.1	150021830	Compensation valve piston/plunger assembly
4.2	10100096	Compensation valve spring
5	150022110	Compensation valve plug with O-ring
6	150024750	Depressurisation valve assembly
6.1	150024760	Pressure discharge valve o-rings
7	10100082	Pump plug with o-ring
7.1	10100083	Pump o-ring
8	150113050	Sensor Pt100
8	150114540	Sensor Ni120



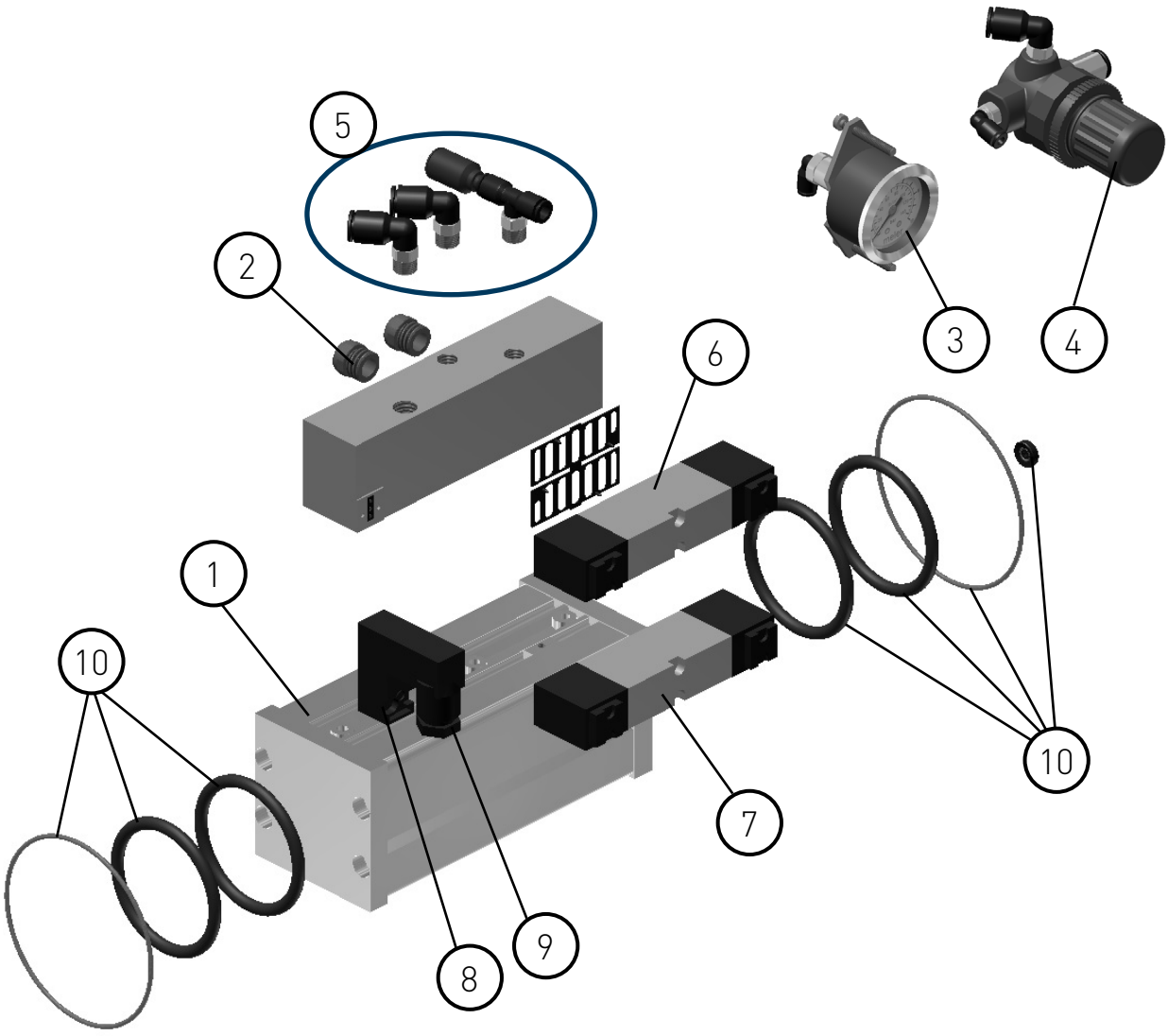


C. PUMP ASSEMBLY

Nº	Ref.	Description
1	150113550	7cc pump body with braces and fittings
2	10100011	Pump shaft 7cc
3	150113570	Tank-pump-distributor seating O-ring kit
4	150113530	7cc pump guide bushing kit
5	150020590	Short ball and socket joint for pump shaft activator
6	150113580	Pump holding support 7cc
7	150024970	Inlet valve fitting micron pump 7cc

D. PNEUMATIC UNIT ASSEMBLY 7cc

Nº	Ref.	Description
1	150113610	Pneumatic unit assembly with filter 7cc
2	150113650	1/4' flat silencer
3	150114480	Pressure gauge
4	10110031	Pressure regulator
5	150113690	Connector kit for 7cc pump unit without VP
6	150020490	Differential valve with o-ring
7	150020500	Control valve with o-ring
8	150020520	Inlet solenoid valve (220V AC)
9	150020630	Connector 2P+T 15x15
10	150020580	O-ring kit of pneumatic cylinder 7cc



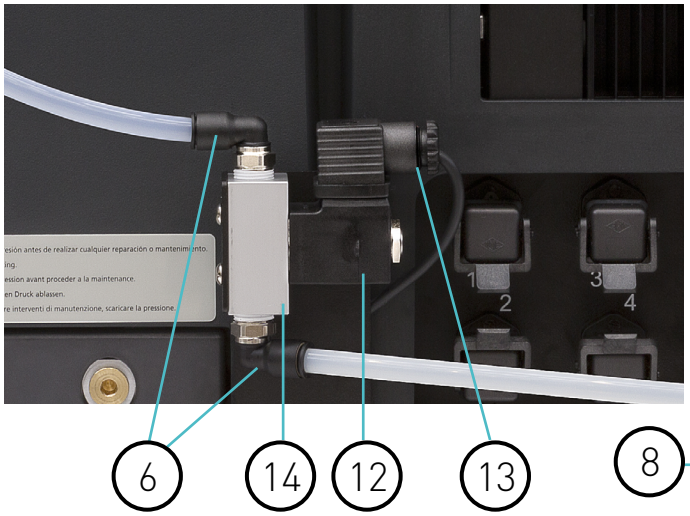
E. CHASSIS ASSEMBLY

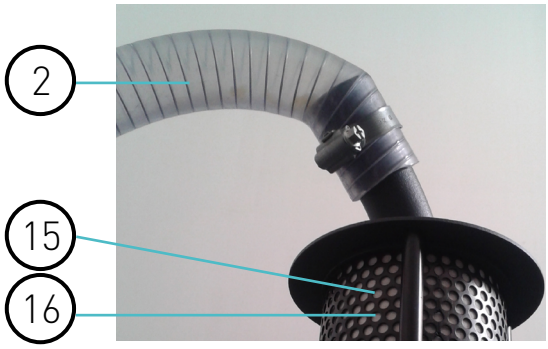
Nº	Ref.	Description
1	150115800	Electrical cabinet door casing
2	150113290	Electrical cabinet casing assembly standard
2	150113360	Electrical cabinet casing assembly with warning light
3	150115810	Tank housing assembly
4	150113330	Tank cover assembly
5	150115770	Magnetic detector closed lid
6	150115890	Kapazitiver Füllstandfühler mit Verstärker

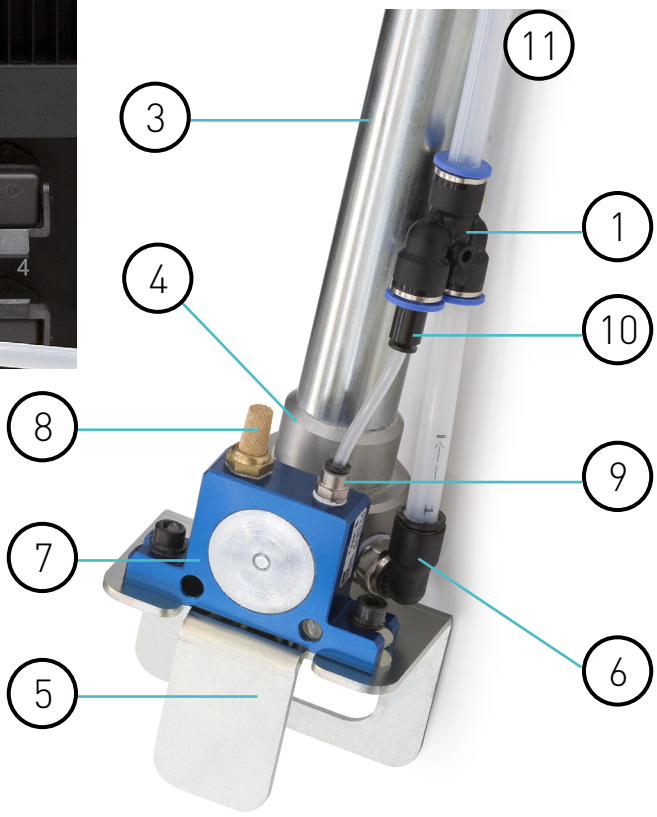


F. SUCTION TUBE AND VALVE ASSEMBLY

Nº	Ref.	Description
1	150025650	Fitting Y Ø10 quick plug
2	150025660	Hose automatic feeder Ø30 (meter)
3	150025670	Metal suction tube
4	150025680	Venturi suction tube
5	150025690	Support for suction tube
6	150025700	Fitting 90° 3/8 Ø10 quick plug
7	150025710	Pneumatic vibrator automatic feeder
8	21300000	Silencer
9	150110180	Straight fitting 1/8 Ø4 quick plug
10	150025740	Reduction Ø10-Ø4 quick plug
11	150025810	Complete suction tube automatic feeder
12	150060080	Solenoid valve coil 24 VDC (10W)
13	150060040	Solenoid valve connector
14	150060070	Solenoid valve assembly 2/2 24VDC 10W
15	150025770	Grid filter 20 mesh
16	150115820	Automatic pellet feeder paper filter

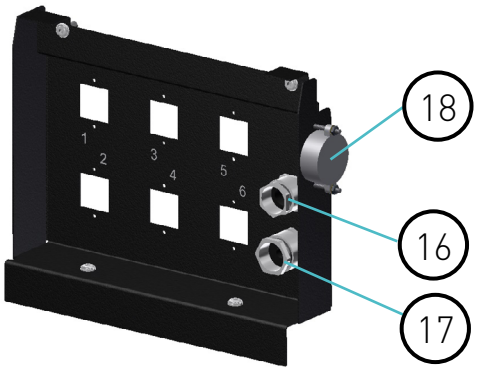


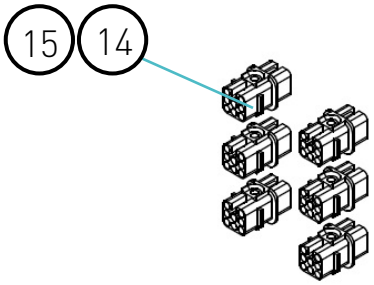




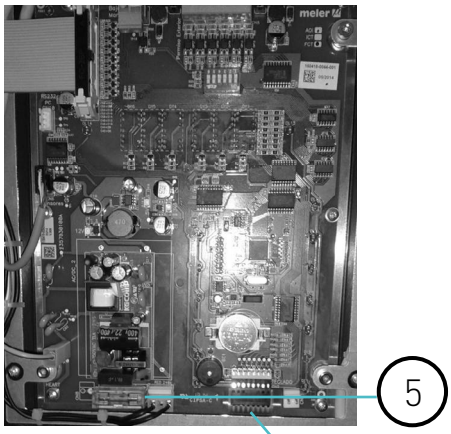
F. ELECTRIC/ ELECTRONIC ASSEMBLY

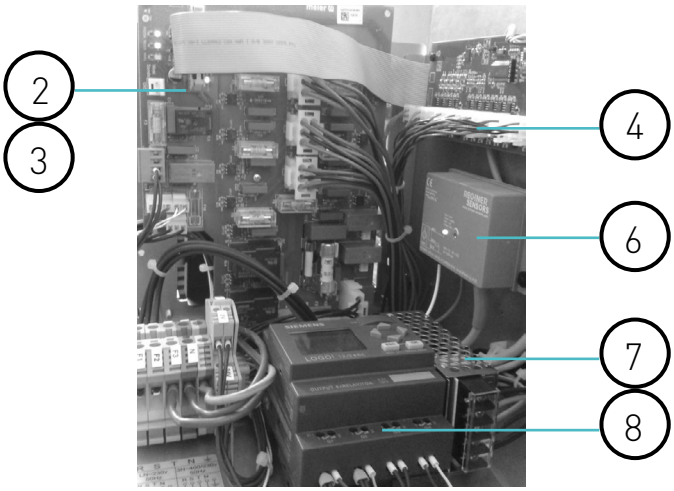
Nº	Ref.	Description
1	150113660	Control board micron
2	150113670	Power board micron 2 outlets
3	150113680	Power board micron 6 outlets
4	150024710	Sensor board Pt100/Ni120
5	150110970	Fuse 0,315A 5x20
6	150115890	Capacitive level sensor (amplifier and probe)
7	150115310	Switching power supply 230VAC/24VDC
8	150112410	Siemens LOGO Programmable relay
9	150112410	Fuse 6,3A 5x20 ultra fast
10	150112560	Fuse 6,3A 6x32 ultra fast
11	150112570	Fuse 16A 10x38 ultra fast
12	150114450	Control to power board ribbon cable assembly
13	150024740	Control to sensor board cable assembly
14	16010003	Female connector 8 pin (base housing)
15	150020720	Female connector 12 pin (base housing)
16	10140040	Cable gland Pg13.5
17	150110570	Cable gland Pg16
18	150025630	Buzzer 24VDC
19	150114460	Power board to DC power supply cable
20	150114470	Main switch
21	150115830	Light yellow button
22	150115840	Black button
23	150022490	Yellow LED
24	150115870	Contact holder
25	150022530	Contact N/O



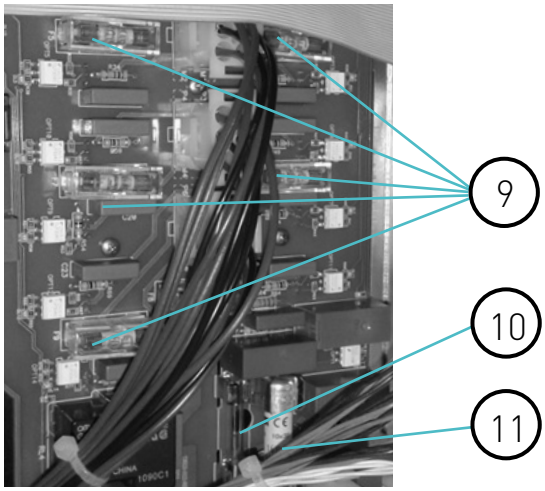


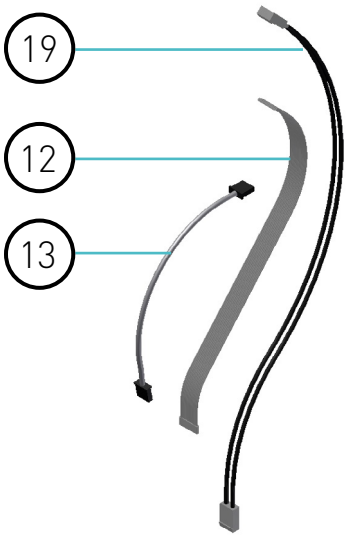
F. ELECTRIC/ ELECTRONIC ASSEMBLY





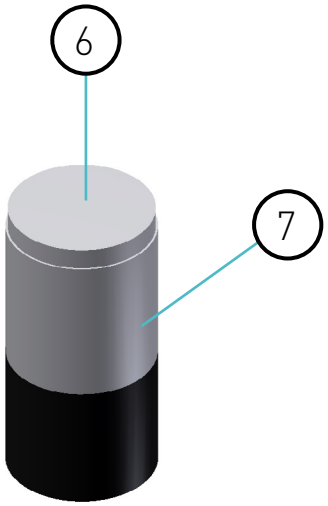








H. WARNING LIGHT AND VP-200 (OPTIONS)



Nº	Ref.	Description
1	150116000	Pressure regulator VP-200 without aerial connector
1	150116010	Pressure regulator VP-200 with aerial connector
2	10000460	Pressure regulator VP-200.
3	10000461	5 µm automatic filter
4	10000457	90º connector with 3 m cable
5	10000458	90º connector with 3 m cable and aerial connector
	10000459	Pneumatic installation kit for pressure regulator
6	150113710	Colourless warning light
7	R0006220	Light 24V 5W

