



INSTRUCTIONS
MANUAL

ANNEX
COMMUNICATIONS
MICRON+ SERIES
ModBus / ProfiBus
EtherNet IP / ProfiNet



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

This manual is a translation of the original that was written by Focke Meler Gluing Solutions, S. A. in spanish language. If there is any discrepancy between the different versions of this manual, the original written in the spanish language shall prevail. Focke Meler Gluing Solutions, S. A. shall not be liable in any way for any damages and/or losses that may be directly or indirectly derived from discrepancies between the original version of the manual and this translation.

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1. SAFETY GUIDELINES

General

The information contained in this section applies not only to everyday equipment 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 equipment or the rest of the installation.

Before beginning work on the equipment, 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 equipment 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/appliator 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 equipment 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 glasses.



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.



Warning: Dangerous area. Risk of entrapment. Carelessness may produce injury or death.



Mechanical components



The hot-melt installation, which is installed to this device, requires moving parts that can cause damage. 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 equipment 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.

The device has no moving mechanical parts, so it does not pose risks to consider in this section.

Electrical components



The system works with single-phase or three-phase current of a certain 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 vicinity.

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.

Pneumatic components



Some equipment uses compressed air to 6 bar pressure. Before any manipulation, please ensure that the circuit has lost fully air pressure. The risk of projection of particles at high speed can cause injury to a certain severity.

Extreme precautions with the residual pressure that could be contained in the circuit, before disconnecting any pneumatic feeding tube.

Thermal components

The entire system works with temperatures that can exceed 200°C (392°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:

1. If the burn is the result of contact with melted adhesive, do not try to remove the adhesive material from the skin. Do not try to remove it once it has solidified either.
2. Cool the affected area down immediately with lots of cold and clean water.
3. Seek medical attention as soon as possible either from the company's medical service or the nearest hospital. Provide the medical staff with the Safety Information Sheet of the adhesive.



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.

Some units are specifically designed to use polyurethane reactive (PUR) hot-melt adhesives. Using PUR on a unit that is not prepared for that purpose may cause severe damage to the unit.

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.

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



Noise emission declaration

The A-weighted emission sound pressure level (L_{pA}) of the unit in operation does not exceed 70 dB(A) under any circumstances.

The maximum C-weighted sound pressure level (L_{pCpeak}) and the A-weighted sound power level (L_{WA}) do not exceed values worthy of mention and thus do not represent a specific risk that must be taken into account.

Intended use



The equipment are designed to be used in the following conditions:

- Hot-melt adhesive fusion and pumping at temperatures up to 200 °C (392 °F). Consult with Meler technical service to operate with higher working temperatures.
- Use of equipment with Meler accessories.
- Installation of equipment according to the security regulations currently in force and the instructions provided in this manual (anchoring, electrical connection, hydraulic connection, etc).
- Use of equipment in non-explosive, non-chemically aggressive environments.
- Use of equipment 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 equipment should never be used under the following conditions:

- Use with reactive polyurethane or any other material that might cause safety or health risks when heated.
- Use of equipment in environments where cleaning is necessary using water jets.
- Use of equipment to heat or melt food products.
- In potentially explosive atmospheres, aggressive chemical environments or outdoors.
- Use or operation without adequate safety protection.
- If the person in question does not have the necessary training to use the unit or to apply all of the necessary safety measures.



Note: Do not modify the equipment or use components that were not supplied by Meler. For any modification of a component of the equipment or part of the installation, you must firstly consult the After-Sales Service

2. MODBUS

Optionally, the unit may come with a RS485 port for MODBUS RTU communications.

This connection makes it possible to read and write the most important parameters for the unit's functionality.

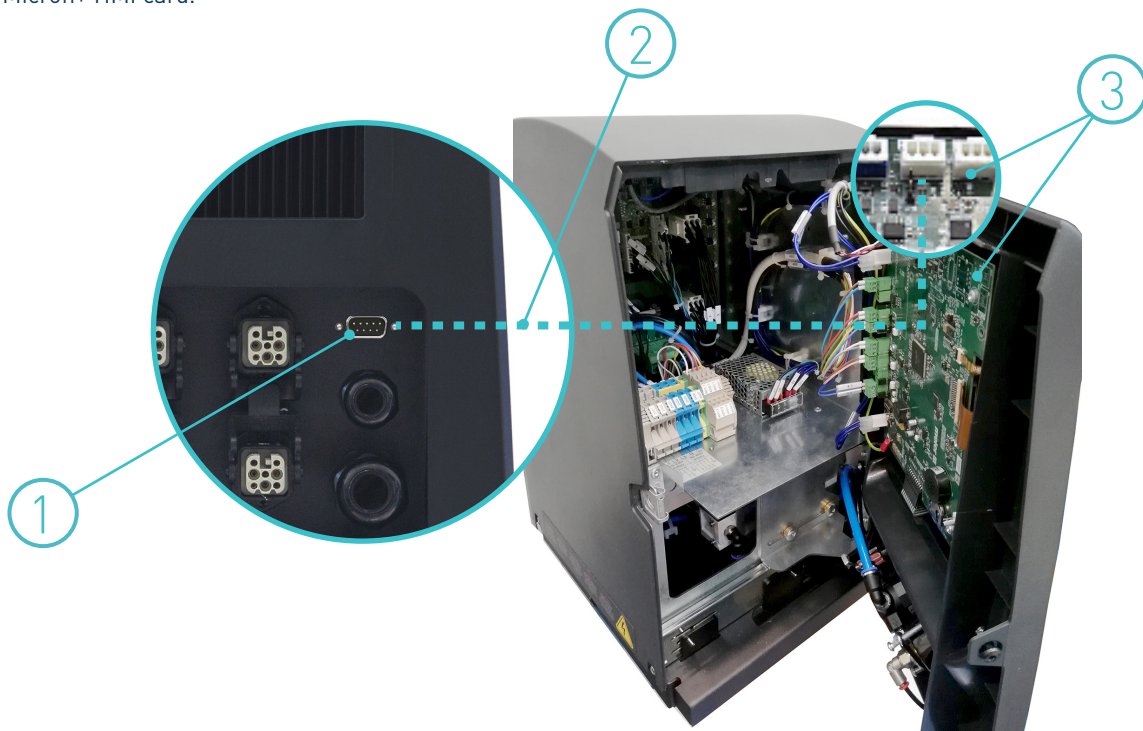
See point "6. Communication data table" in this manual to see the full list of functions.

For more information about the communications gateway, please contact our After-Sales Service or your Meler Sales Agent.

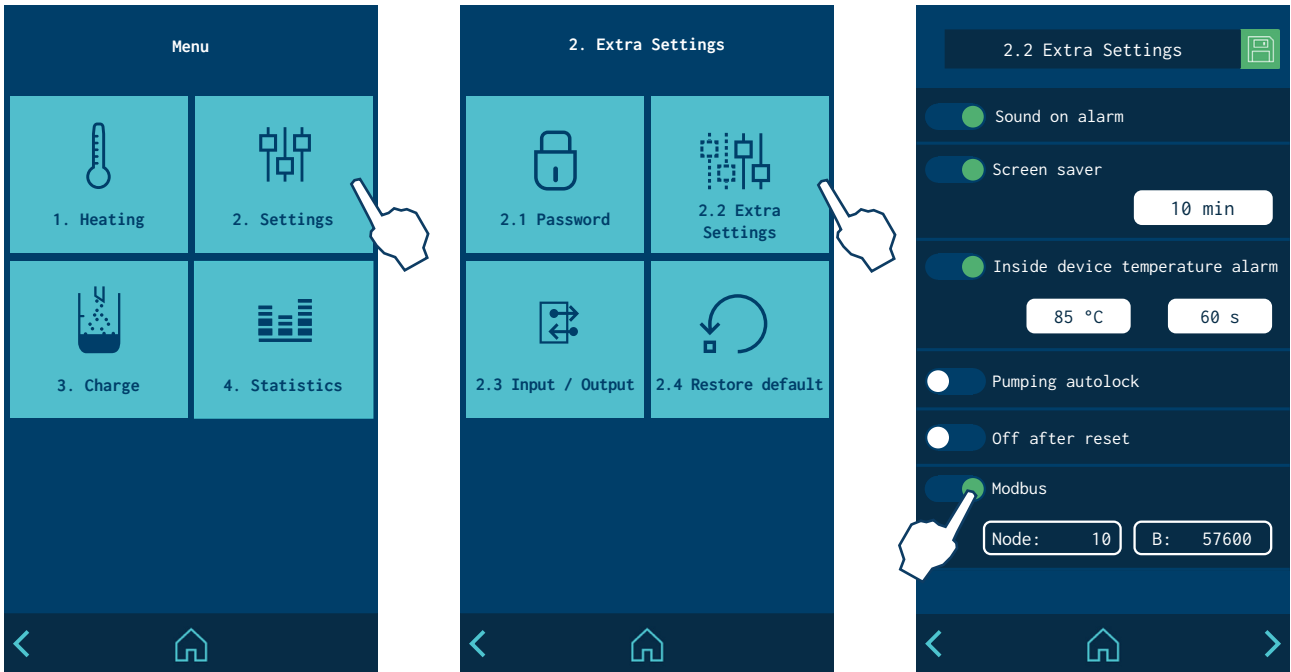


Main components

1. DB9 external connector (pre-installed).
2. Internal interface cable (pre-installed).
3. Micron+ HMI card.



Enable Modbus communications



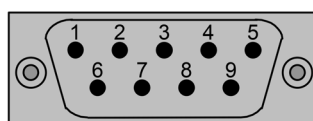
To enable or disable ModBus communications, go to the menu and select “2. Settings / 2.2 Additional settings / Modbus” on the programming screen of the melter.

Once enabled you can set the values of “Node” and “Baudrate” as you wish.

Communication protocols

- Hardware: Integrated into the Micron+ HMI card.
- Classification: slave
- Data transmission speed: up to 115200 bauds.
- Connection: DB9, located in the back of the melter.
- Node:10
- Baudrate: 57600
- Parity: None
- Bit Stop: 1

Connections



DB9 Pin 1 = GND
 DB9 Pin 5 = B (D1)
 DB9 Pin 9 = A (D0)

3. ETHERNET IP

Optionally, units in the Micron+ series may come with an Ethernet IP communications gateway installed inside the unit.

This connection makes it possible to read and write the most important parameters for the unit's functionality.

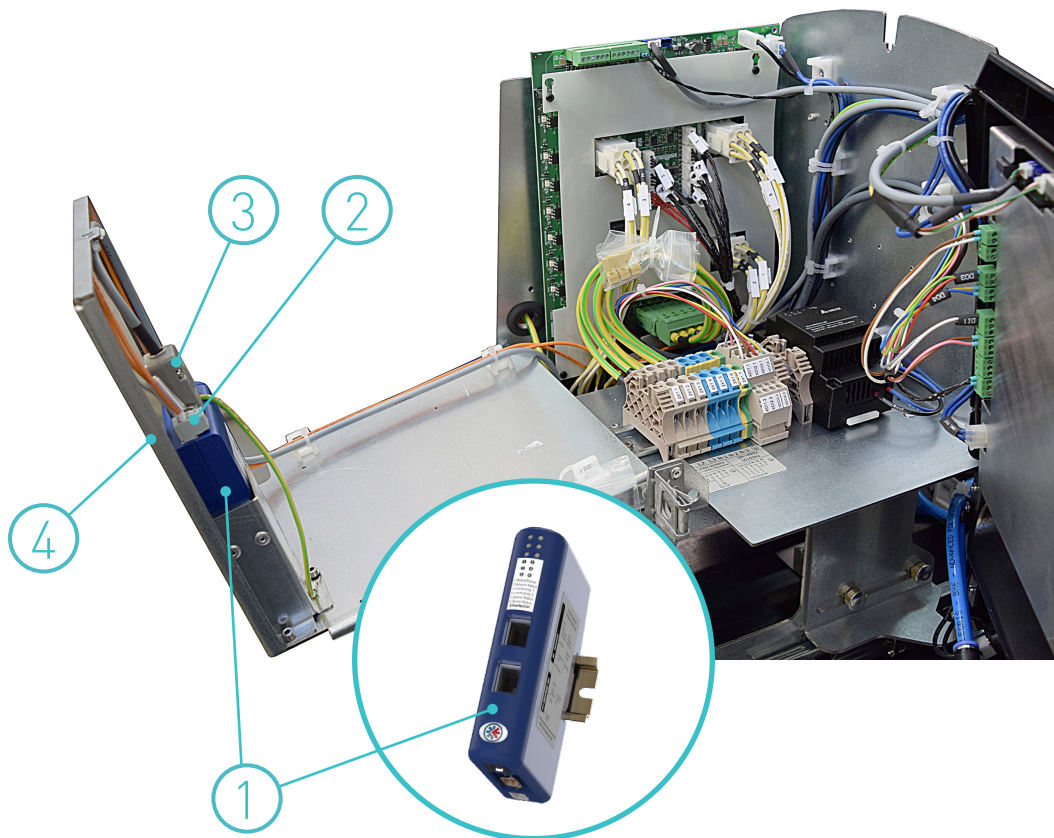
See point "6. Communication data table" in this manual to see the full list of functions.

For more information about the communications gateway, please consult the manufacturer's website at www.anybus.com or contact our After-Sales Service or your Meler Sales Agent.



Main components

1. Communications gateway
2. Power supply cable
3. Gateway-HMI communications cable
4. Folding bracket.

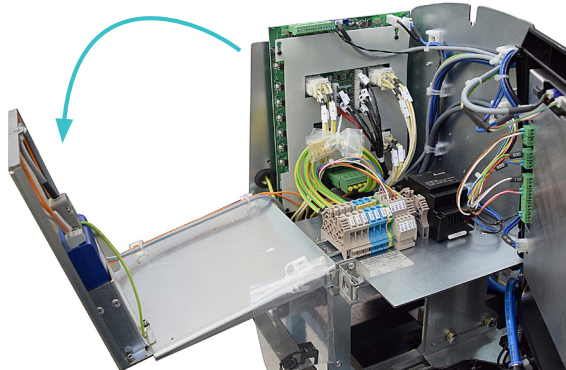
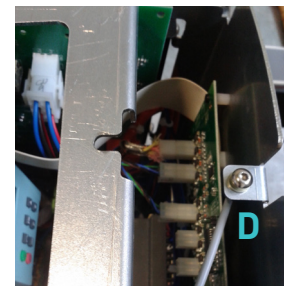
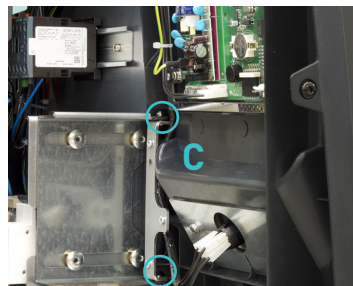


Connecting the communications cable

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

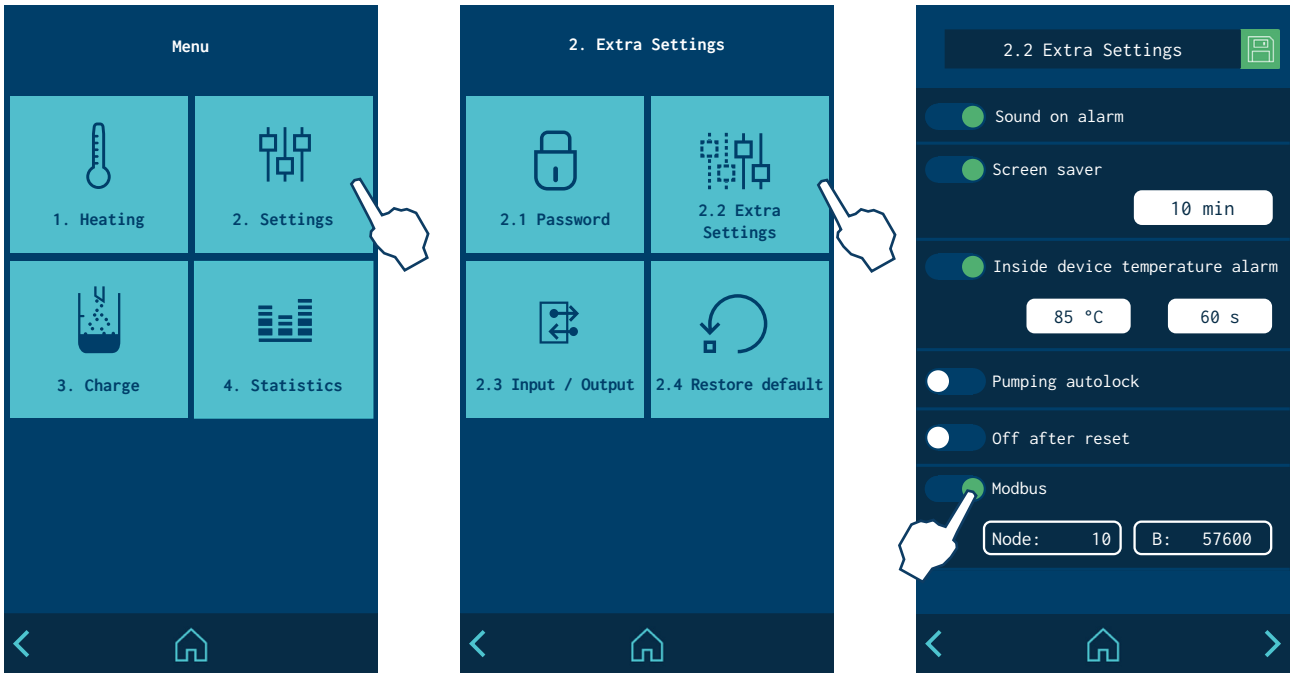


1. Turn off the melter.
2. To remove the casing from the machine, first you have to separate the electrical cabinet from the tank. To do this, slacken the 1/4 turn screw as indicated (A) and slide it along the guides.
3. To remove the electrical cabinet door, open the door by turning the 1/4 turn screw 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.



5. Remove the pre-drilled piece (E) from the back of the unit in order to mount the correct adapter for the type of connector being installed.
6. Pass the cable through the pre-drilled adaptor and into the interior of the electric cabinet to connect it to the correct port on the communications gateway.
7. Connect the communications cable that runs from the external unit to the RJ45 port of the communications gateway (F).
8. Verify that the cable is connected securely and that its path through the electric cabinet does not run the risk of entrapment, shearing or any accidental wear.
9. Place the clamp to secure the cable in the back of the unit, close it and secure it to the adaptation plate.
10. To enable the device, see the point 'Enabling ModBus communications'.

Enable Modbus communications



To enable or disable ModBus communications, go to the menu and select '2. Settings / 2.2 Additional settings / Modbus' on the programming screen of the melter.

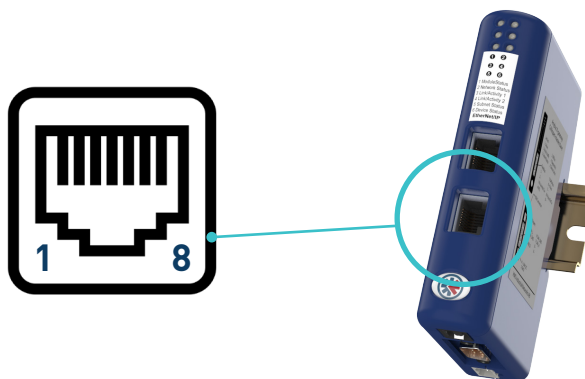
Once enabled you can set the values of 'Node' and 'Baudrate' as you wish.

Communication protocols

- Hardware: fieldbus gateway, located in the electric cabinet.
- Classification: slave
- Data transmission speed: Gateway of 10 to 100 MBit/s
- Connection: RJ-45, twisted pair cable - 10baseT-UTP, located in the gateway.
- IP address 192.168.0.2

Connections

Pin	Description
1	TD+
2	TD-
3	RD+
4	NC
5	NC
6	RD-
7	NC
8	Termination



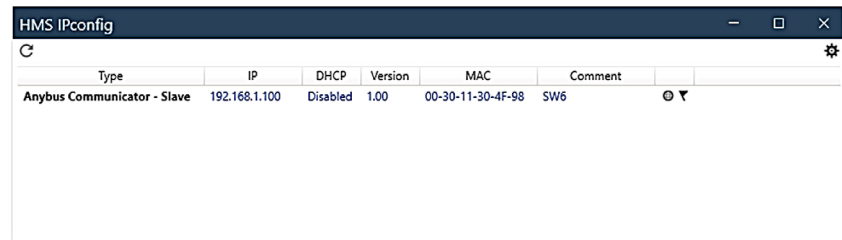
IP address setting

By default, devices with Ethernet IP communications are factory configured with:

- Static IP address: 192.168.0.2
- Subnet mask: 255.255.255.0

Para configurar una dirección IP diferente hay que utilizar la herramienta para Windows "HMS IPconfig". Se puede descargar desde la web de Meler o en la página del fabricante www.anybus.com/support.

To configure a different IP address, use the Windows tool "HMS IPconfig". It can be downloaded from the Meler website or on the manufacturer's website www.anybus.com/support.



To change the IP configuration of the machine, select it from the list and configure it in the dialog box. Finally press "Apply" to accept the changes and restart the machine.

For more information, see "HMS IPconfig User Manual" from the manufacturer of the internal gateway (Anybus Communicator).

PLC configuration. EDS file

To configure the machine with Ethernet IP communications in the PLC, it is necessary to include the EDS file supplied by Meler in the project. You can also download the most current version on the gateway manufacturer's website www.anybus.com/support.

4. PROFINET

Optionally, units in the Micron+ series may come with an Profinet communications gateway installed inside the unit.

This connection makes it possible to read and write the most important parameters for the unit's functionality.

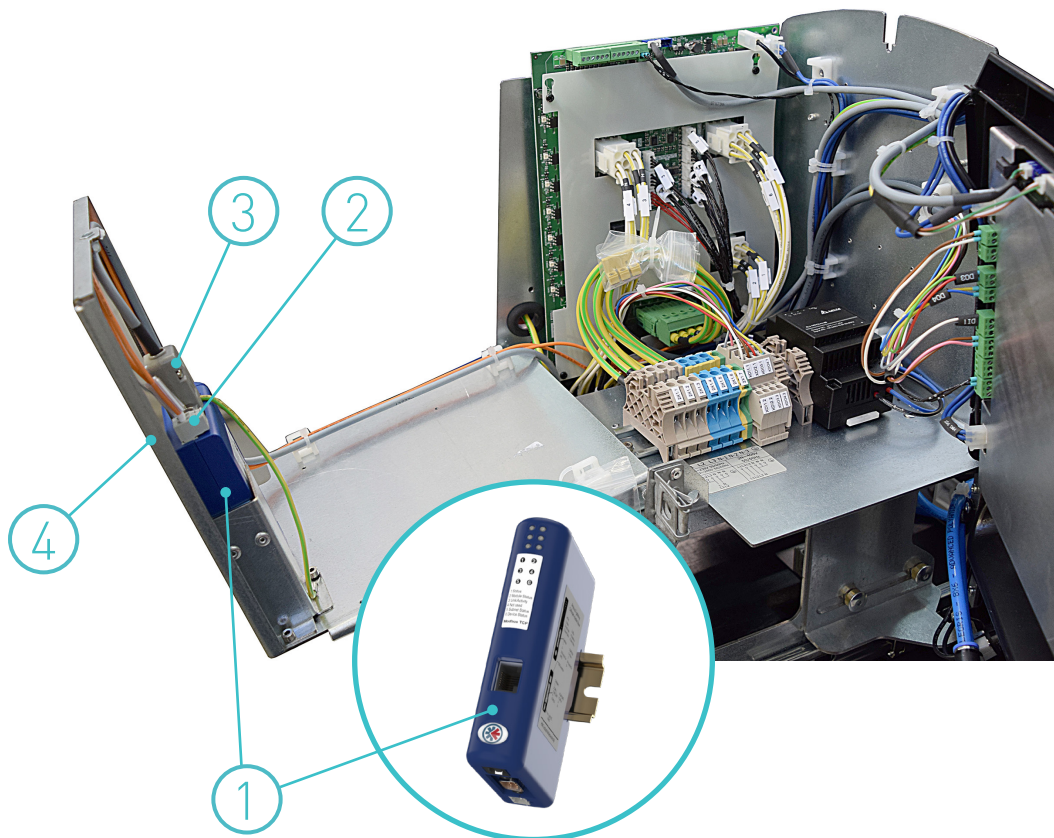
See point "6. Communication data table" in this manual to see the full list of functions.

For more information about the communications gateway, please consult the manufacturer's website at www.anybus.com or contact our After-Sales Service or your Meler Sales Agent.



Main components

1. Communications gateway
2. Power supply cable
3. Gateway-HMI communications cable
4. Folding bracket.

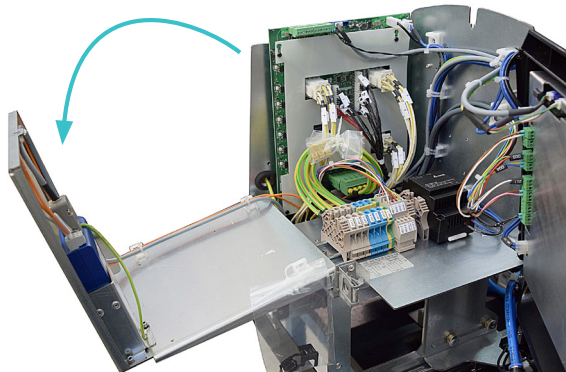
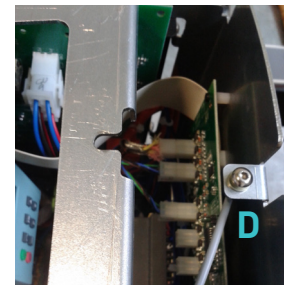


Connecting the communications cable



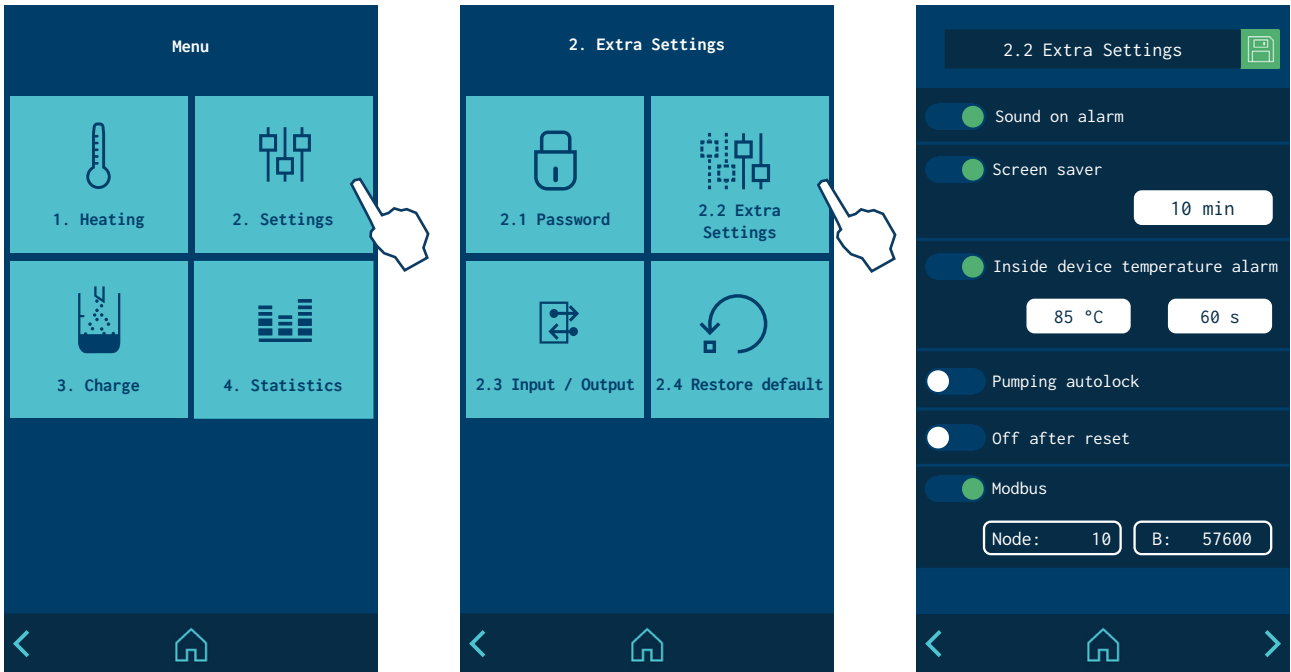
Aviso: Riesgo de recibir sacudidas eléctricas. La falta de atención puede provocar lesiones o la muerte.

1. Turn off the melter.
2. To remove the casing from the machine, first you have to separate the electrical cabinet from the tank. 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.



5. Remove the pre-drilled piece (E) from the back of the unit in order to mount the correct adapter for the type of connector being installed.
6. Pass the cable through the pre-drilled adaptor and into the interior of the electric cabinet to connect it to the correct port on the communications gateway.
7. Connect the communications cable that runs from the external unit to the RJ45 port of the communications gateway (F).
8. Verify that the cable is connected securely and that its path through the electric cabinet does not run the risk of entrapment, shearing or any accidental wear.
9. Place the clamp to secure the cable in the back of the unit, close it and secure it to the adaptation plate.
8. To enable the device, see the point "Enabling ModBus communications".

Enable Modbus communications



To enable or disable ModBus communications, go to the menu and select “2. Settings / 2.2 Additional settings / Modbus” on the programming screen of the melter.

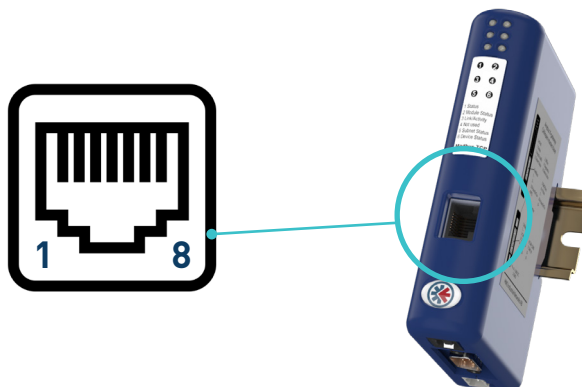
Once enabled you can set the values of “Node” and “Baudrate” as you wish.

Communication protocols

- Hardware: fieldbus gateway, located in the electric cabinet.
- Classification: slave
- Data transmission speed: Gateway of 10 to 100 MBit/s
- Connection: RJ-45, twisted pair cable - 10baseT-UTP, located in the gateway.
- IP address : none

Connections

Pin	Description
1	TD+
2	TD-
3	RD+
4	NC
5	NC
6	RD-
7	NC
8	NC



Node Name Configuration

By default, machines with Profinet communications are factory configured with the node name "MELER_Profinet" and no assigned IP address.

The user can use the PROFINET configuration tool in their PLC project to reconfigure the desired node name and assign an IP address.

PLC configuration. GSDML file

For the configuration of the machine with Profinet communications in the PLC, it is necessary to include the GSDML file supplied by Meler in the project. You can also download the most current version on the gateway manufacturer's website www.anybus.com/support.

5. PROFIBUS

Optionally, units in the Micron+ series may come with an Profibus communications gateway installed inside the unit.

This connection makes it possible to read and write the most important parameters for the unit's functionality.

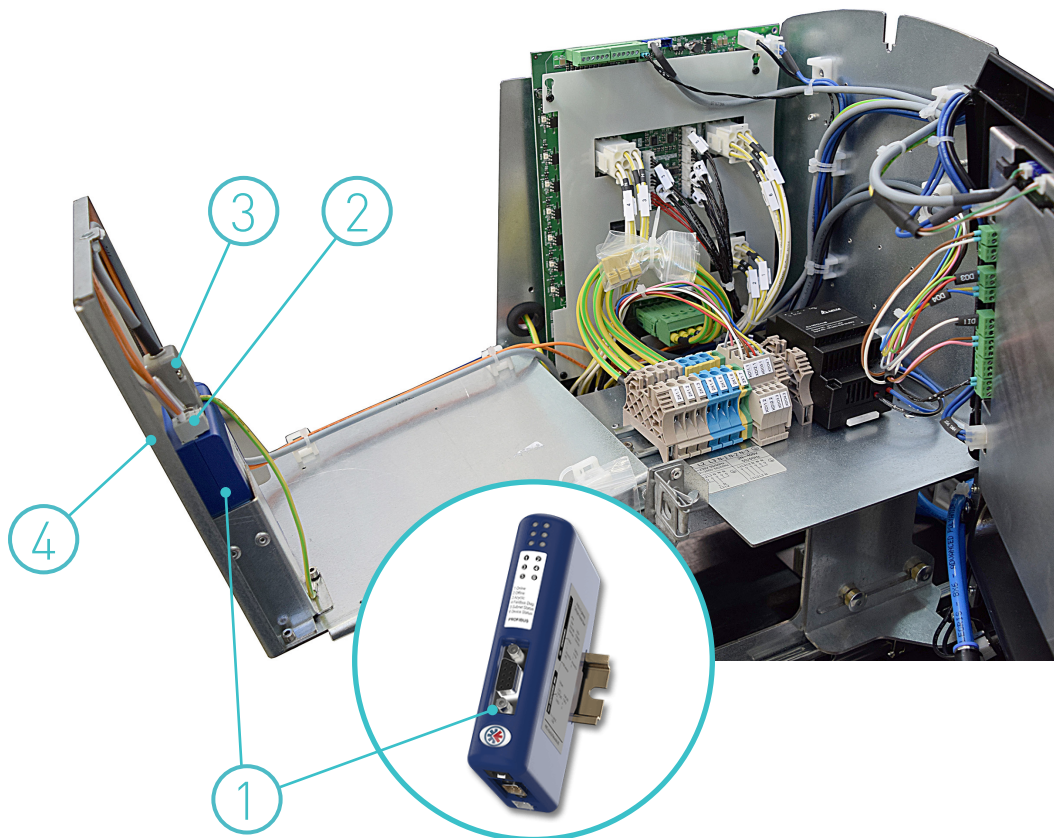
See point "6. Communication data table" in this manual to see the full list of functions.

For more information about the communications gateway, please consult the manufacturer's website at www.anybus.com or contact our After-Sales Service or your Meler Sales Agent.



Main components

1. Communications gateway
2. Power supply cable
3. Gateway-HMI communications cable
4. Folding bracket.

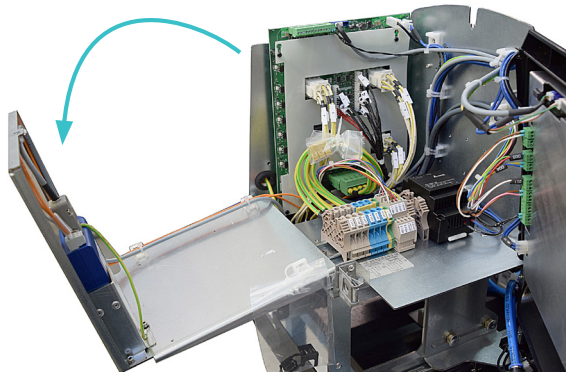
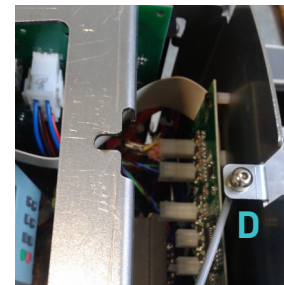
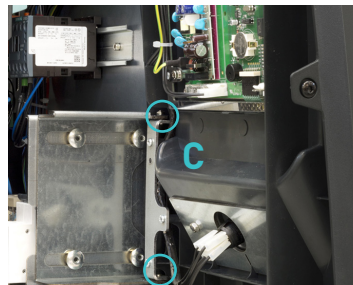


Connecting the communications cable



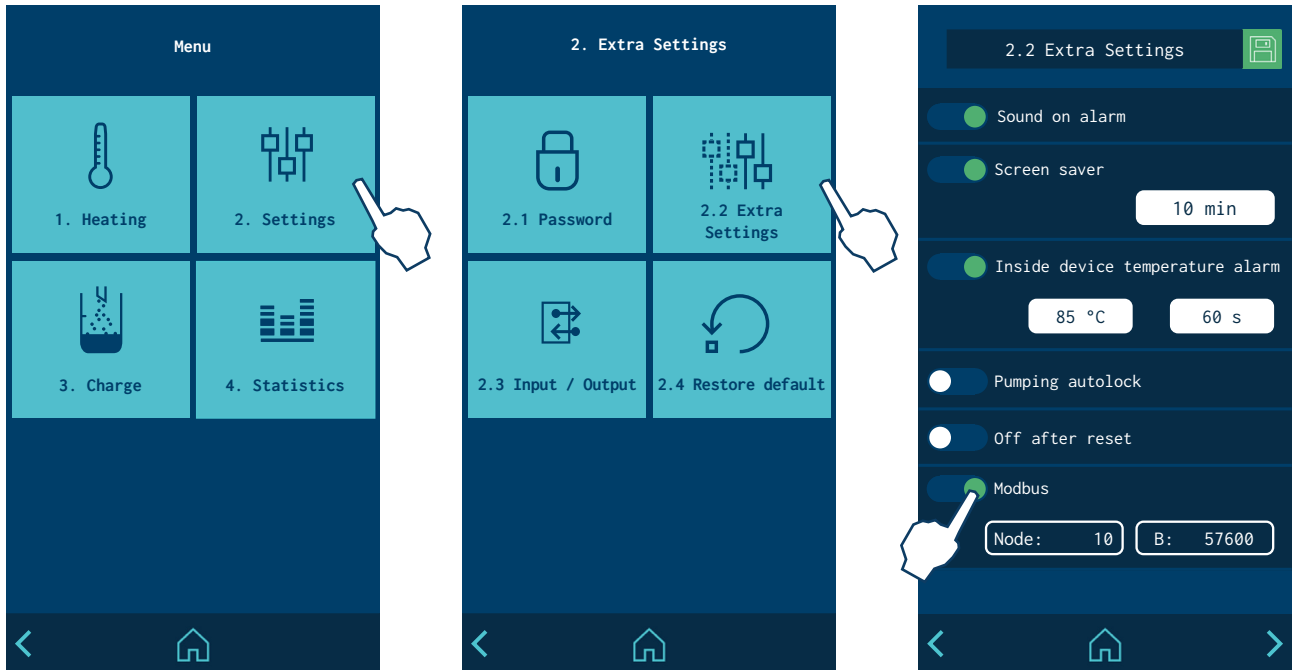
Aviso: Riesgo de recibir sacudidas eléctricas. La falta de atención puede provocar lesiones o la muerte.

1. Turn off the melter.
2. To remove the casing from the machine, first you have to separate the electrical cabinet from the tank. 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.



5. Remove the pre-drilled piece (E) from the back of the unit in order to mount the correct adapter for the type of connector being installed.
6. Pass the cable through the pre-drilled adaptor and into the interior of the electric cabinet to connect it to the correct port on the communications gateway.
7. Connect the communications cable that runs from the external unit to the RJ45 port of the communications gateway (F).
8. Verify that the cable is connected securely and that its path through the electric cabinet does not run the risk of entrapment, shearing or any accidental wear.
9. Place the clamp to secure the cable in the back of the unit, close it and secure it to the adaptation plate.
8. To enable the device, see the point "Enabling ModBus communications".

Enable Modbus communications



To enable or disable ModBus communications, go to the menu and select “2. Settings / 2.2 Additional settings / Modbus” on the programming screen of the melter.

Once enabled you can set the values of “Node” and “Baudrate” as you wish.

Communication protocols

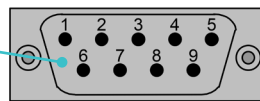
- Hardware: fieldbus gateway, located in the electric cabinet.
- Classification: slave
- Data transmission speed: 57,5 Kbits/s
- Connection: DB9, located in the gateway.

Connections

Profibus interface				
Pin	Signal	In/Out	Description	Conenct to
1	SHIELD		Shield	Housing
2	n. c.		Not connected	
3	PB_B	IO	PROFIBUS B-Line	PB-Interface
4	PB_RTS	0	Request-To-Send	PB-Interface
5	GND_ISO		Ground (isolated)	PB-Interface
6	VCC_ISO		VCC 5V (isolated)	PB-Interface
7	n. c.		Not connected	
8	PB_A	IO	PROFIBUS A-Line	PB-Interface
9	n. c.		Not connected	



In case of being the last node of the bus, it is necessary to install a bus termination resistor (120ohms) between B-line and A-line. It is recommended to use a standard PROFIBUS connector (RS485) from Siemens.



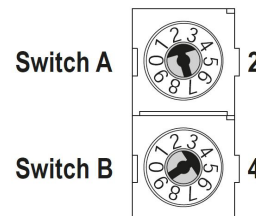
Node address configuration

By default, machines with Profibus communications are factory configured with node address "42".

To select another node address use the internal selectors A and B. To access these selectors remove the front cover of the Profibus gateway.

- Node address = (switch B * 10) + (switch A * 1),

Example, node address selection 42:



PLC configuration. GSD file

To configure the machine with Profibus communications in the PLC, it is necessary to include the GDS file supplied by Meler in the project. You can also download the most current version on the gateway manufacturer's website www.anybus.com/support.

6. COMMUNICATION DATA TABLE

The data tables are as follows::

Address	Description	MAGNITUDE (*)	MIN	MAX	Read / Write	TYPE
0	Always	number	0x1234	0x1234	R	uint16
1	Software Version HMI	number	0	65535	R	uint16
2	General device Status	number	0	7	R	uint16
3	Temperature OK	number	0	1	R	uint16
4	Pumping	number	0	3	R	uint16
5	Level	number	0	2	R	uint16
6	Charging	number	0	2	R	uint16
7	Current Alarm	bitfield	0	32768	R	uint16
8	Current Warning	bitfield	0	7	R	uint16
9	Temperature Real Tank	°C	0	250	R	uint16
10	Temperature Real Distributor	°C	0	250	R	uint16
11	Temperature Real Hose 1	°C	0	250	R	uint16
12	Temperature Real Gun 1	°C	0	250	R	uint16
13	Temperature Real Hose 2	°C	0	250	R	uint16
14	Temperature Real Gun 2	°C	0	250	R	uint16
15	Temperature Real Hose 3	°C	0	250	R	uint16
16	Temperature Real Gun 3	°C	0	250	R	uint16
17	Temperature Real Hose 4	°C	0	250	R	uint16
18	Temperature Real Gun 4	°C	0	250	R	uint16
19	Temperature Real Hose 5	°C	0	250	R	uint16
20	Temperature Real Gun 5	°C	0	250	R	uint16
21	Temperature Real Hose 6	°C	0	250	R	uint16
22	Temperature Real Gun 6	°C	0	250	R	uint16
23	Temperature Setpoint Tank	°C	40	230	R / W	Uint16
24	Temperature Setpoint Distributor	°C	40	230	R / W	Uint16
25	Temperature Setpoint Hose 1	°C	40	230	R / W	Uint16
26	Temperature Setpoint Gun 1	°C	40	230	R / W	Uint16
27	Temperature Setpoint Hose 2	°C	40	230	R / W	Uint16
28	Temperature Setpoint Gun 2	°C	40	230	R / W	Uint16
29	Temperature Setpoint Hose 3	°C	40	230	R / W	Uint16
30	Temperature Setpoint Gun 3	°C	40	230	R / W	Uint16
31	Temperature Setpoint Hose 4	°C	40	230	R / W	Uint16
32	Temperature Setpoint Gun 4	°C	40	230	R / W	Uint16
33	Temperature Setpoint Hose 5	°C	40	230	R / W	Uint16

(*) Depending on the device used by the client, bitfield variables can be output SWAPP (interleaved bytes).

Address	Description	MAGNITUDE (*)	MIN	MAX	Read / Write	TYPE
34	Temperature Setpoint Gun 5	°C	40	230	R / W	Uint16
35	Temperature Setpoint Hose 6	°C	40	230	R / W	Uint16
36	Temperature Setpoint Gun 6	°C	40	230	R / W	Uint16
37	General device Status Command	number	0	4	R / W	uint16
38	Inhibition zones	bitfield	0	16383	R / W	uint16
39	Standby zones	bitfield	0	16383	R / W	uint16
40	Temperature Settings: Warning temperature changed setpoint Low	°C	0	120	R / W	uint16
41	Temperature Settings: Warning temperature changed setpoint High	°C	0	120	R / W	uint16
42	Temperature Settings: Warning time changed setpoint	seconds	1	60	R / W	uint16
43	Temperature Settings: Temperature alarm in Zone Low	°C	0	120	R / W	uint16
44	Temperature Settings: Temperature alarm in Zone High	°C	0	120	R / W	uint16
45	Temperature Settings: Temperature alarm time in Zone	seconds	1	60	R / W	uint16
46	Temperature Settings: Main Temperature Alarm	°C	40	230	R / W	uint16
47	Temperature Settings: Main temperature alarm time	seconds	1	60	R / W	uint16
48	Temperature Settings: Temperature OK delay enabled	number	0	1	R / W	uint16
49	Temperature Settings: Temperature OK delay time	minutes	1	60	R / W	uint16
50	Pump security enabled	number	0	1	R / W	uint16
51	Pumping Settings: Pump 1 - Enabled	number	0	1	R / W	uint16
52	Pumping Settings: Pump 1 - RPM setpoint	rpm	0	180	R / W	uint16
53	Pumping Settings: Pump 1 - Ext. Reference	number	0	1	R / W	uint16
54	Pumping Settings: Pump 1 - Ext. Permission	number	0	1	R / W	uint16
55	Pumping Settings: Pump 2 - Enabled	number	0	1	R / W	uint16
56	Pumping Settings: Pump 2 - RPM setpoint	rpm	0	180	R / W	uint16
57	Pumping Settings: Pump 2 - Ext. Reference	number	0	1	R / W	uint16
58	Pumping Settings: Pump 2 - Ext. Permission	number	0	1	R / W	uint16
59	Auto Feeder: auto mode Enabled	number	0	1	R / W	uint16
60	Sequential mode Enabled	number	0	1	R / W	uint16
61	Calendar mode Enabled	number	0	1	R / W	uint16
62	Activity Control Enabled	number	0	1	R / W	uint16
63	Common: Year	number	2018	3000	R / W	uint16
64	Common: Month	number	1	12	R / W	uint16
65	Common: Day of month	number	1	31	R / W	uint16

Address	Description	MAGNITUDE (*)	MIN	MAX	Read / Write	TYPE
66	Common: Hour	number	0	23	R / W	uint16
67	Common: Minute	number	0	59	R / W	uint16
68	Common: Seconds	number	0	59	R / W	uint16
69	Shooting Ctrl: Photocells status	number	0	63	R	uint16
70	Shooting Ctrl: Electrovalves status	number	0	63	R	uint16
71	Shooting Ctrl: Analog input	number	0	10000	R	uint16
72	Shooting Ctrl: Analog output 1	number	0	1000	R	uint16
73	Shooting Ctrl: Analog output 2	number	0	1000	R	uint16
74	Shooting Ctrl: Encoder ppm	number	0	65536	R	uint16
75	Shooting Ctrl: Belt speed	number	0	65536	R	uint16
76	Shooting Ctrl: Selected product total Low	number	0	65536	R	uint16
77	Shooting Ctrl: Selected product total High	number	0	65536	R	uint16
78	Shooting Ctrl: Selected product partial Low	number	0	65536	R	uint16
79	Shooting Ctrl: Selected product partial High	number	0	65536	R	uint16
80	Shooting Ctrl: Total product Low	number	0	65536	R	uint16
81	Shooting Ctrl: Total product High	number	0	65536	R	uint16
82	Shooting Ctrl: Available products number	number	0	100	R	uint16
83	Shooting Ctrl: Selected product	number	0	100	R / W	uint16
84	Shooting Ctrl: Shooting controller - Enabled	number	0	1	R / W	uint16
85	Free 1	number	0	65536	R / W	uint16
86	Free 2	number	0	65536	R / W	uint16
87	Free 3	number	0	65536	R / W	uint16
88	Free 4	number	0	65536	R / W	uint16
89	Free 5	number	0	65536	R / W	uint16
90	Free 6	number	0	65536	R / W	uint16
91	Free 7	number	0	65536	R / W	uint16
92	Free 8	number	0	65536	R / W	uint16
93	Free 9	number	0	65536	R / W	uint16
94	Free 10	number	0	65536	R / W	uint16
95	Free 11	number	0	65536	R / W	uint16

Values:

2 -----0: OFF // 1: HEATING // 2: TEMP OK DELAY // 3: STANDBY // 4: INHIBITED // 5: ERROR //
6: READY // 7: UNKNOWN

3 -----0: No_Ok // 1: Ok

4 -----0: No active pumps // 1: Pump 1 active // 2: Pump 2 active // 3: Both pumps active

5 -----0: No_Level // 1: Level // 2: No_Level_Sensor_Configured

6 -----0: No_charging // 1: charging // 2: No_Feeder_Configured

7 -----[15 bits]: b14: insideTemp // b13: thermostat // b12: Level // Tempb11: Pumping // b10: Feeder //
b9: DataLogger // b8: ProfiBus // b7: NV memory // b6: ModBus // b5: CAN // b4: Free time over //
b3: Broken Sensor // b2: Under temp // b1: Over temp// b0: Total temp

8 -----[2 bits]: b0: Temperature // b1: Feeder // b2: Level

37 -----0: N/A // 1:OFF // 2: ON // 3: STANDBY // 4: INHIBITED

38 -----[14 bits]: b13: Zone 14 // b12: Zone 13 // b11: Zone 12 // b10: Zone 11 // b9: Zone 10 // b8: Zone 9 //
b7: Zone 8 // b6: Zone 7 // b5: Zone 6 // b4: Zone 5 // b3: Zone 4 // b2: Zone 3 // b1: Zone 2 // b0: Zone 1 //

39 -----[14 bits]: b13: Zone 14 // b12: Zone 13 // b11: Zone 12 // b10: Zone 11 // b9: Zone 10 // b8: Zone 9 //
b7: Zone 8 // b6: Zone 7 // b5: Zone 6 // b4: Zone 5 // b3: Zone 4 // b2: Zone 3 // b1: Zone 2 // b0: Zone 1 //

48 -----0: Disabled // 1: Enabled

50 -----0: Without_security // 1: With_security

51 -----0: Disabled // 1: Enabled

53 -----0: Disabled // 1: Enabled

54 -----0: Disabled // 1: Enabled

55 -----0: Disabled // 1: Enabled

57 -----0: Disabled // 1: Enabled

58 -----0: Disabled // 1: Enabled

59 -----0: Disabled // 1: Enabled

60 -----0: Disabled // 1: Enabled

61 -----0: Disabled // 1: Enabled

62 -----0: Disabled // 1: Enabled

69 -----[6bits]: b6: PC6 // b5: PC5 // b4: PC4 // b3: PC3 // b2: PC2 // b1: PC1

70 -----[6bits]: b6: EV6 // b5: EV5 // b4: EV4 // b3: EV3 // b2: EV2 // b1: EV1

71 -----Volts x 1000

72 -----Volts x 100

73 -----Volts x 100

74 -----Pulses per meter

75 -----m/min x 10

83 -----0: Not selected // 1: First selectable product // N: Available products number

84 -----0: Disabled // 1: Enabled

7. SPARE PARTS LIST

The list of the most common spare parts 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.

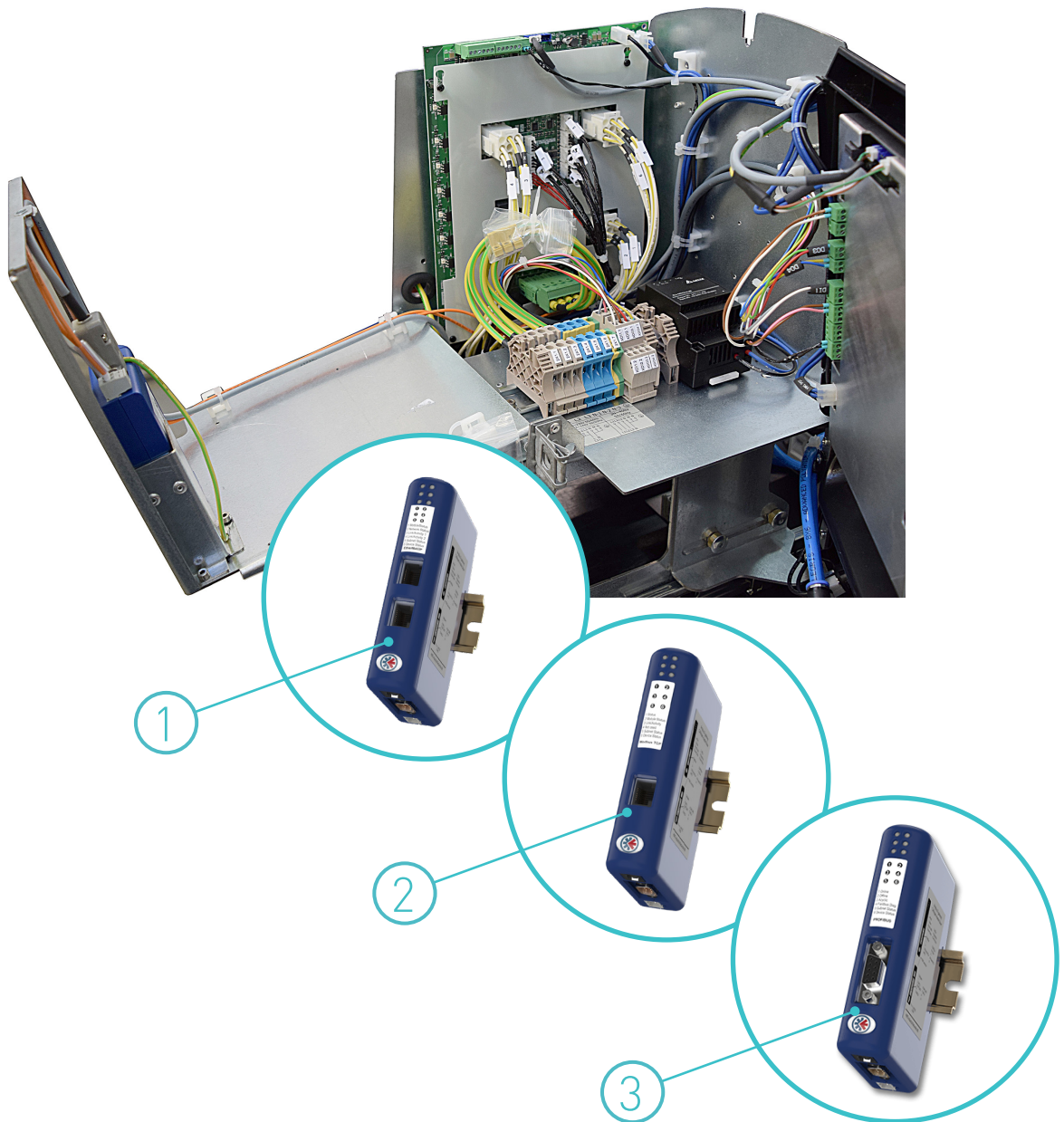
As a visual aid, drawings of the parts are included and are numbered to help identify them in the list. For further information about the content of the spare parts, click on the number of the spare part.



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A. COMMUNICATIONS GATEWAY

N°	Ref.	Denomination
1	150130530	Communications gateway Ethernet IP AB7072
2	150130540	Communications gateway Profinet AB7013
3	150130660	Communications gateway Profibus AB7000



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