

DP640 - DP644

Service Book

KDAS00016G



P/OVAN adopts a policy of on-going development.

With the exception of information required by law, the general information (or diagrams) featured in this document may depict models and/or versions different to the one you have purchased.

This will in no way alter the validity or applicability of the information provided.

Conformity certificate



"EC" CONFORMITY CERTIFICATE

Issued in conformity to standard EN45014.

We "PIOVAN S.p.A." - Via delle Industrie, 16 - 30036 Santa Maria di Sala (VE) - ITALY, declare under our sole responsibility that the machine:

Type: _____ **MACHINE NAME**

Equipment number: _____ **EQUIPMENT**

Year of construction: _____ **YEAR**

Complies with Machinery Directive, as well as with:

DIRECTIVES

- xxxxxxxxxx Electromagnetic compatibility.
xxxxxxxxxx Low voltage.
xxxxxxxxxx Pressure equipment. Fluid group x.
(category x, evaluation module x) - only for (x) models
xxxxxxxxxx Pressure equipment.

	fluid group	category	evaluation module
	x	x	x*
pressure switch	-	-	-
compressor	-	-	-
evaporator	-	-	-
condenser (xxx models)	-	-	-
safety valve	-	-	-
liquid receiver (xxx models)	-	-	-

*notified body: xxx - number: xxx

STANDARDS

- xxxxxxxxxx Safety of machinery. Electrical equipment of machines.
xxxxxxxxxx Safety of machinery. Basic concepts, general principles for design.
xxxxxxxxxx Symbols for danger signs. General risks.
xxxxxxxxxx Refrigerating systems and heat pumps. Safety and environmental requirements. Part 1, 2, 3, 4.

Do not use the machine until the machine in which it will be incorporated and of which it will become a part has been identified and certified to comply with the provisions of the directives indicated; that is, until the machine to which this certificate refers has been incorporated in the final machine so that they form a single unit.

xxxxxxxxxx (technical manager)



Santa Maria di Sala (VE), dd/mm/yyyy

Conformity certificate



The original version of the conformity certificate is written in Italian and English only.

Depending on the type of machine to which the certificate refers, some parts of this document may not be appropriate:
in any case, refer only to the contents of the certificate in your possession.

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CONTROL PANEL

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FLOW CHARTS

TABLES OF SPARE PARTS

WIRING DIAGRAM



Safety rules

1. Failure to observe the basic rules of accident prevention and safety is one of the main causes of accidents when using and servicing industrial machinery.
2. Before performing any operation on the machine you must carefully read this manual, the safety rules below and the information given on the warning notices affixed to the machine. Do not allow unauthorised personnel to use, adjust or repair the machine.
3. In the design and manufacture of the machine and the writing of the instruction manual, all attempts have been made to eliminate or reduce the hazards for those who install, use or repair the machine. If you come across any further potentially hazardous conditions, please inform the manufacturer, who will take measures to remedy the problem.
4. When required, all persons working on the machine must wear protective clothing (helmets, safety footwear, gloves, earplugs or hearing defenders, safety goggles etc.) in accordance with international workplace safety standards.
5. Only persons with adequate technical training, who have a complete working knowledge of the machine, who have the necessary physical and psychological requirements for working safely on the machine and who have fully read the supplied documentation are allowed to operate the machine and perform routine maintenance tasks on it.
6. Set up footboards or platforms (in accordance with the safety regulations in force) when installing parts that cannot be reached from ground level.
7. When interfacing with other machinery, strictly observe the instructions given by the manufacturers of the other machines.
8. Check that the safety systems (guards, microswitches, sensors) are in perfect working order before starting work. Any parts that are not in perfect working order must be repaired before proceeding. It is strictly forbidden to remove safety devices, tamper with the electrical system or any of the mechanisms.
9. This machine must be used for the purpose for which it was designed.
Improper use of the machine is strictly prohibited.
10. Do not touch the machine with your hands or any other parts of the body if they are wet or damp.

The manufacturer cannot be held responsible for any injury to persons or damage to property resulting from the non-observance of the above safety rules.

These rules supplement but do not replace the statutory industrial accident prevention regulations in force in the country where the machine is installed.

Graphic safety symbols

**DANGER**

Refers to procedures or practices which, if not performed correctly, *cause* serious harm to health, injury or death.

**DANGER**

Danger of electrical shocks!

**DANGER**

Hot surface!

**WARNING**

Refers to procedures or practices which, if not performed correctly, *may cause* serious harm to health, injury or death.

**WARNING**

Protective footwear must be worn!

**WARNING**

Protective gloves must be worn!

**WARNING**

Face guard must be used!

**WARNING**

Respiratory protection must be used!

**CAUTION**

Refers to procedures or practices which, if not performed correctly, *may cause* serious damage to the system or individual components thereof.

**ATTENTION**

Refers to possible hazardous situations that *may cause* serious damage to the system or individual components thereof.

1. Description

The DP640 - DP644 dryer is a dry air generator for drying plastic granules. It can be used in *single-hopper* or *multi-hopper* systems.

In a *single-hopper* system the granules are dried in a single hopper and then sent to the processing machine.

In a *multi-hopper* system two or more hoppers are used: the granules are dried in the main hopper and are stored in the secondary (or holding) hoppers at the appropriate temperature until they are to be used.

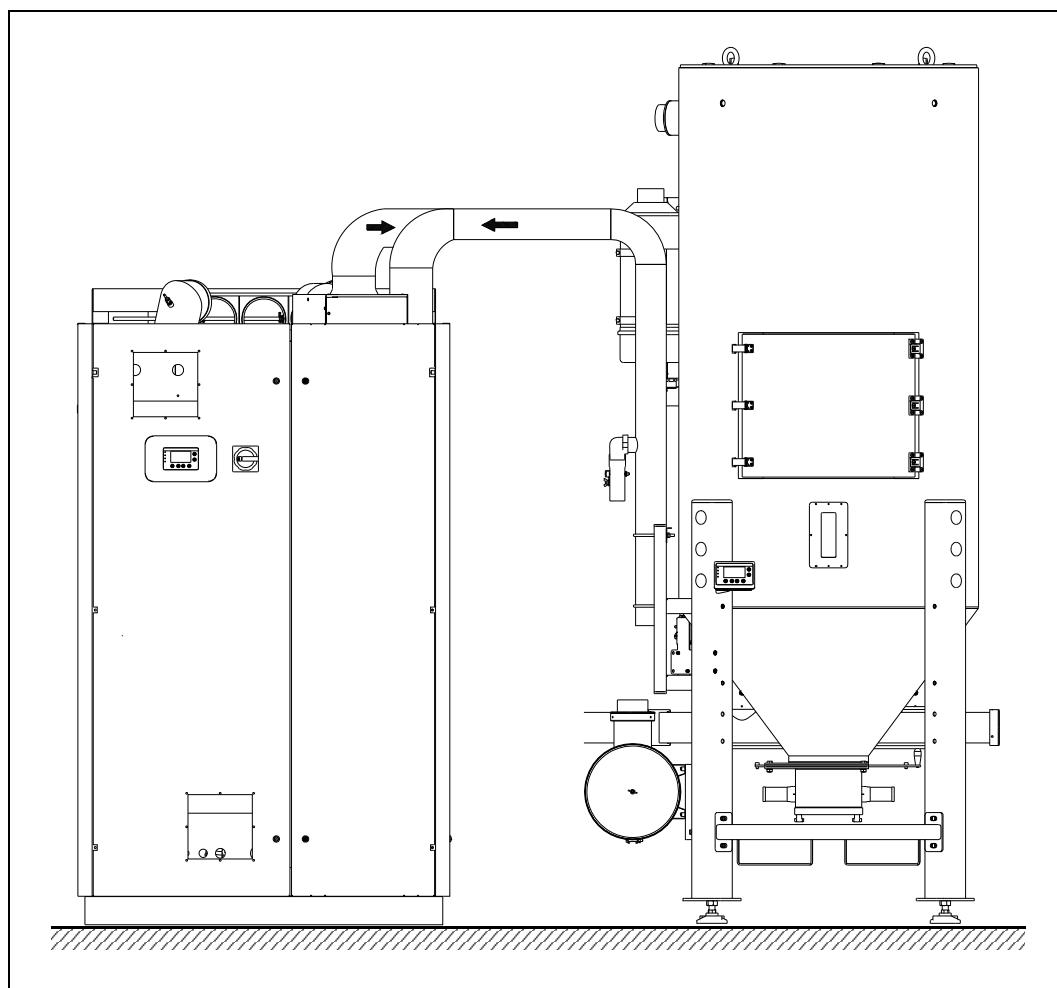


Fig. 1

The appliance must not be used to treat:

- plastic materials in powder, fibre, flake, scale or threadlike form;
- foodstuffs, scraps of vegetable or animal origin;
- substances that release liquids, harmful gases or substances when heated;
- anything not strictly defined as granular plastic material.

The machine must not be used in environments with potentially explosive atmosphere caused by powders or gases.

2. Technical data

MAIN TECHNICAL DATA		DP640			DP644		
Power supply voltage	V	400	380	460	400	380	460
Power supply frequency	Hz	50	60		50	60	
Process piping diameter	mm	150			50		
Regeneration outlet piping diameter							
Compressed air piping diameter		8					
Cooling battery piping diameter	"G	1					
Filtration grade	µm	20					
Filtering surface	m ²	0.24 x 2					
Noise							
Equivalent sound pressure level	dB(A)	< 80					
Weight							
Total weight	kg	950			1050		
Installed power							
Process blower M1	kW	12.5	14.5	15	17.5		
Regeneration blower M8		1.6	2.1	1.6	2.1		
Process heating element EH11/A		50.4*		63*			
Regeneration heating element EH2 - EH3		17.1					
Total power installed		82.1*	84.6	97.2*	100.2*		
* HT Version (high temperature)							

MAIN TECHNICAL DATA		DP640			DP644											
Power supply voltage	V	400	380	460	400	380	460									
Power supply frequency	Hz	50	60	50	60											
Consumption																
Average compressed air consumption	Nl/h	5														
Minimum coolant consumption	l/h	15°C (59°F)	3600													
		34°C (93°F)	4600													
Required cooling capacity	kcal/h	20000			25000**											
** Closed circuit version with supplementary cooler																
Performance																
Air flow-rate in hopper ($\pm 10\%$)	m³/h	1000	1200	1400	1500											
Maximum process temperature	°C (°F)	200 (392)														
Average Dew Point		-55 (-76)														
Operating requirements																
Coolant																
Maximum inlet temperature	°C (°F)	34 (93)														
Maximum hardness	°Fr	10 ÷ 20														
Maximum pressure	kPa (bar)	800 (8)														
Minimum pressure		200 (2)														
Minimum filtration grade	Mesh	30														
Maximum glycol percentage	%	25														

MAIN TECHNICAL DATA		DP640			DP644						
Power supply voltage	V	400	380	460	400	380	460				
Power supply frequency	Hz	50	60		50	60					
Compressed air											
Intake temperature	°C (°F)	5 ÷ 40 (41 ÷ 104)									
Intake pressure	kPa (bar)	700 ÷ 900 (7 ÷ 9)									
Filtration grade	µm	20									
Dew Point	°C (°F)	< -5 (< 23)									
Maximum concentrations of salts in coolant											
Chlorides	mg/l	1000									
Sulphates		50									
Nitrates		100									
Sulphides		1000									
Ammonium		2									
Free carbon dioxide		5									
Oxygen		8									
Iron and manganese		1									
Free chlorine		5									



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Working environment		
Ambient temperature	°C (°F)	5 ÷ 40 (41 ÷ 104)
Altitude	m	Max 2000
Transport and storage temperature	°C (°F)	-25 ÷ 55 (13 ÷ 131) 70 (158) < 24h

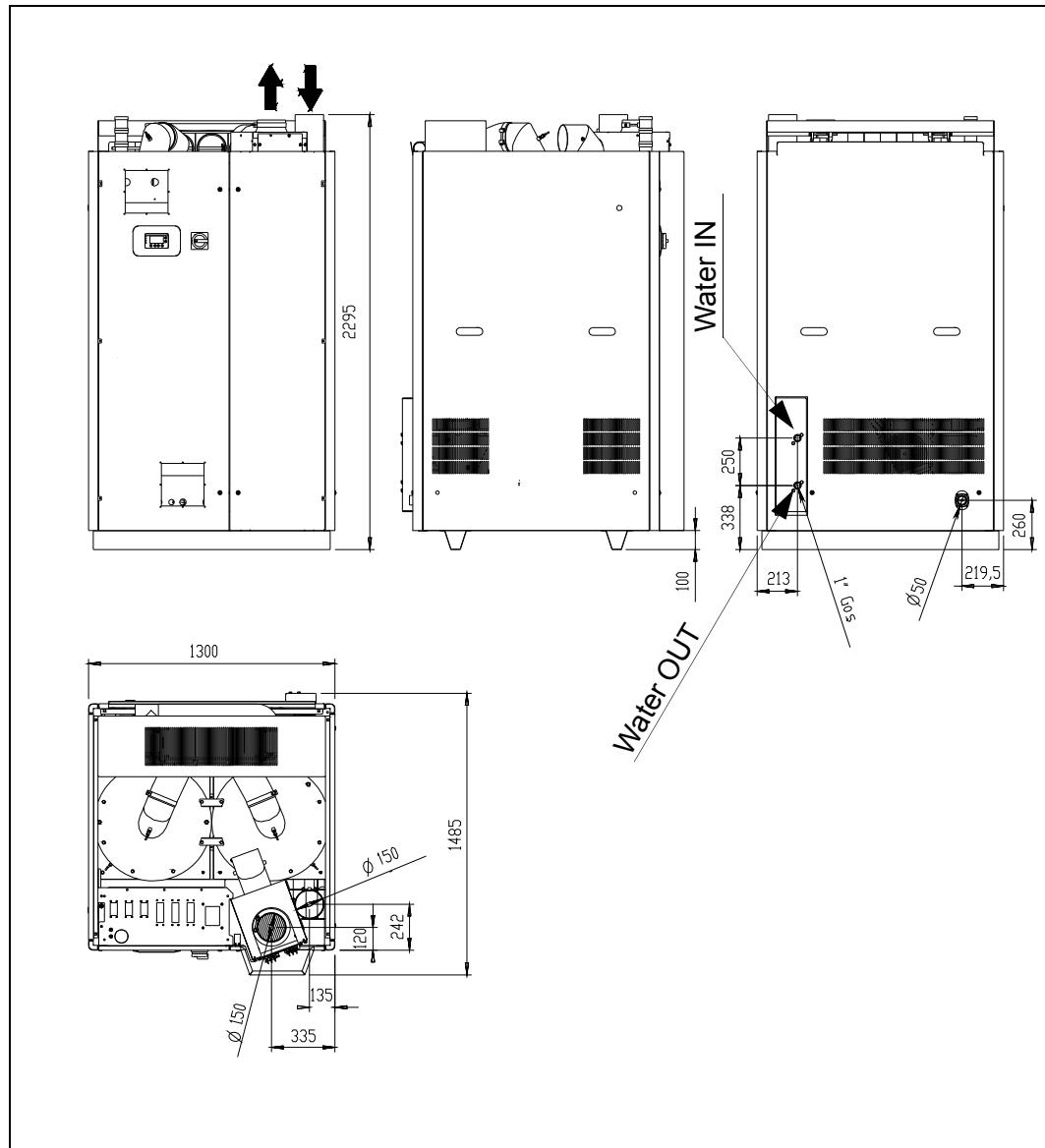


Fig. 2

3. *Handling*

Safety rules for handling, lifting, packing, and unpacking

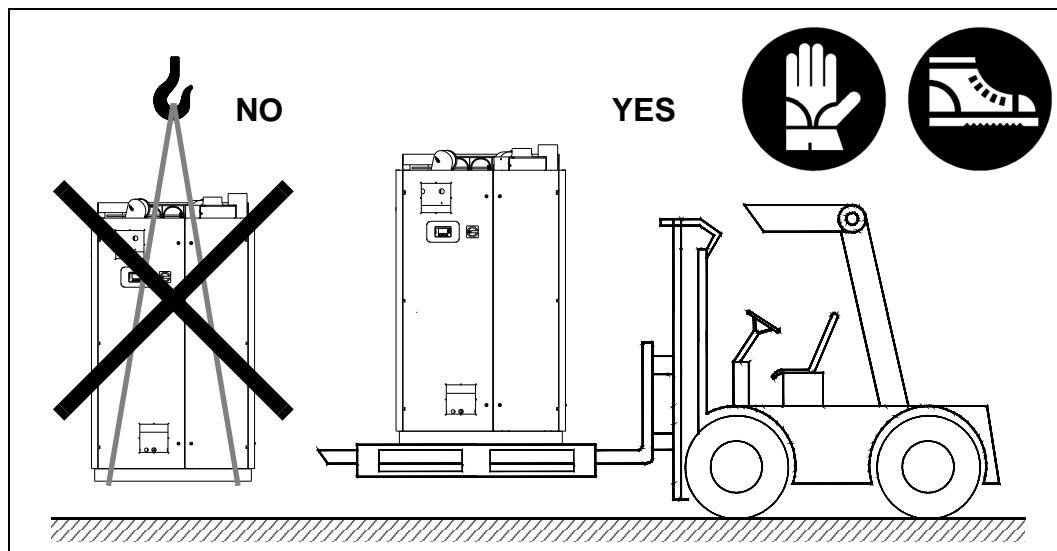
1. The machine must be handled by expert personnel in accordance with statutory health and safety regulations.
2. Use handling equipment that conforms to the safety requirements stated in directive 89/392/EU and subsequent amendments. The handling equipment must be accompanied by documentation certifying its conformity to the above requirements and must be capable of bearing the weight of the machine plus its packing. Carefully follow any instructions marked on the machine packing (the weight is given on the outside of the packing). Do not use ropes or chains to harness the pack.
3. All handling operations must be performed with the machine completely empty, i.e. with no process materials or fluids inside it, and with any external support structures removed.
4. All the machine parts involved in the lifting operation are sized for handling solely the machine with no accessories installed.
5. If the machine is lifted with ropes, make sure its weight is evenly distributed over all the lifting points and that the strain on the ropes is uniform. The angle between each rope and the horizontal plane must not be less than 45°.
6. Fasten any loose parts. Make sure that the load is properly balanced and securely fastened to the handling equipment. Always proceed with the utmost caution to avoid injuring persons or damaging the machine.
7. All persons not involved in operating the means of transport must be kept at a safe distance from the moving load.
8. Position the machine on a perfectly flat surface of a suitable size that is strong enough to bear its weight.
9. After removing the packing, check that all parts of the machine are present and in good condition. If you have any doubts, do not use the machine: contact the P/IOVAN Technical Service Department or an authorised service centre. The packaging must be disposed of in accordance with binding waste disposal regulations.



CAUTION

The packing material can cause cuts or abrasions.

- **Pay special attention and always wear suitable personal protective equipment!**
-


Fig. 3

The machine can be shipped packed in palletisable cardboard packing, crates, cages, wooden pallets and protective plastic sheets. Keep the packing materials to protect the machine if it has to be moved again in the future; if the material is disposed of, observe the waste disposal regulations in force in the place of installation.



WARNING

Risk of machine falling during handling procedures.

- ▶ Pay special attention and always wear suitable personal protective equipment!
- ▶ Do not stand near the machine when in movement.
- ▶ Do not use slings to lift the machine: only move the unit with a fork-lift truck or pallet truck (see Fig. 3 - Page 12).
- ▶ Before moving the machine, lift it slowly a few centimetres with the fork-lift truck or pallet truck in order to find the centre of gravity.

4. Operation

1. In the machine there are two towers that contain molecular sieves, with high moisture absorption capacity.
2. The two towers go through an alternating **process cycle** (i.e. drying cycle) and **regeneration cycle** (while one tower is doing the process cycle, the other is doing the regeneration cycle).
3. In the process cycle, the blower **M1** sends the moist air coming from the hopper to the tower in the process stage. Here, the air is dehumidified by the molecular sieves and then sent back to the hopper, in order to remove more moisture from the plastic granules before re-entering the cycle.
4. The purpose of the regeneration cycle is to remove the moisture from the tower that has just completed a process cycle (to prepare it for the next cycle). This cycle is in two stages:
 - a) **Heating stage:** in this stage, heated air is sent through the tower to remove the moisture absorbed by the molecular sieves in the previous process cycle.
 - b) **Cooling stage:** in this stage, cold air is sent through the tower to bring the molecular sieves to the optimal temperature for another process cycle.
5. At the end of the regeneration cycle (i.e. when the tower in the regeneration stage is ready to start another process cycle), the **tower switchover** occurs: the tower that was in the process cycle goes to the regeneration cycle and vice versa.

5. Control board

The following is located on the machine control board (see **Fig. 4 - Page 13**):

A00 Control panel: used for adjusting the machine operation cycle and setting the relevant work parameters.

For the instructions on its use, see *Chap. 13. - Page 30*.

01 Display: used to show the work parameter settings and those recorded by the control system.

QS1 Main switch: used to power up the machine.

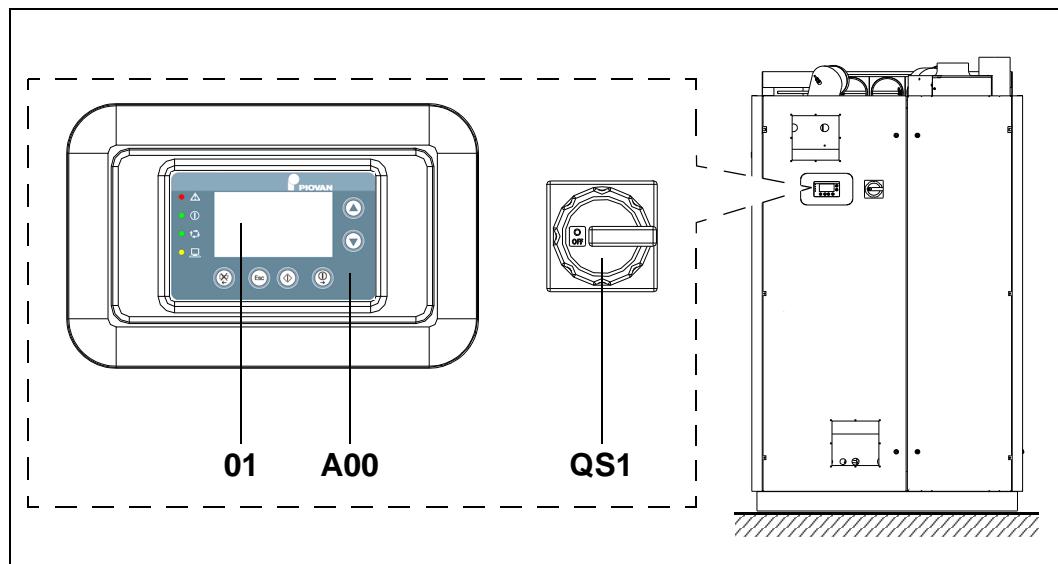


Fig. 4

6. Installation

Installation safety rules

1. The machine must be installed by skilled personnel in compliance with binding safety and health regulations, following the instructions in this manual.
2. Make sure the installation work is performed in conditions of adequate visibility that remain constant through time; install supplementary lighting if necessary.
3. Mark off the work zone with tape and put up notices warning of the hazards in the areas where the installation work is taking place.
4. Install the machine in a place that is protected from aggressive chemicals and the weather.
5. Check that the supply voltage and frequency stated on the machine data plate correspond to those of the electricity mains and check that the mains circuit is suitably scaled for the machine maximum power input (refer to the "technical data" table and the wiring diagram).
6. The machine must be connected to an efficient earth connection (as specified in binding electrical safety regulations). You must make sure that this essential safety requirement is complied with. If you have any doubts, have the circuit thoroughly checked by a qualified electrician. Electrical safety devices, suitably scaled for the total machine power, must be installed at the point of connection to the electrical power feeding line (see wiring diagram).



WARNING

Risk of serious damage to health, injury or death.

- It is **strictly forbidden** to remove or modify the safety devices and guards fitted by the manufacturer.
-

6.1. Positioning

1. Position the machine on a perfectly flat surface, making sure it is suitably constructed and sized in relation to the weight and dimensions of the machine and the connected structures.
2. Observe the minimum positioning clearances shown in **Fig. 5 - Page 15**. Failure to observe these clearances could impede installation work or prevent access to the machine for maintenance purposes.
3. The chosen installation site must offer sufficient ventilation for the machine and must not be subject to the presence of hazardous processes or possible concentrations of explosive gases.

From side **A** it is possible to access:

- electric panel;
- process and regeneration filters;
- heating chamber.

From side **B** it is possible to access:

- process and regeneration blowers;
- closed circuit piping;
- Dew Point probe;
- pneumatic valves;
- closed circuit regeneration cooling batteries.

From side **C** it is possible to access:

- process and regeneration boxes;
- differential pressure switch;
- closed circuit piping;
- drying towers.

From side **D** it is possible to access:

- process cooling batteries;
- water capacity control.

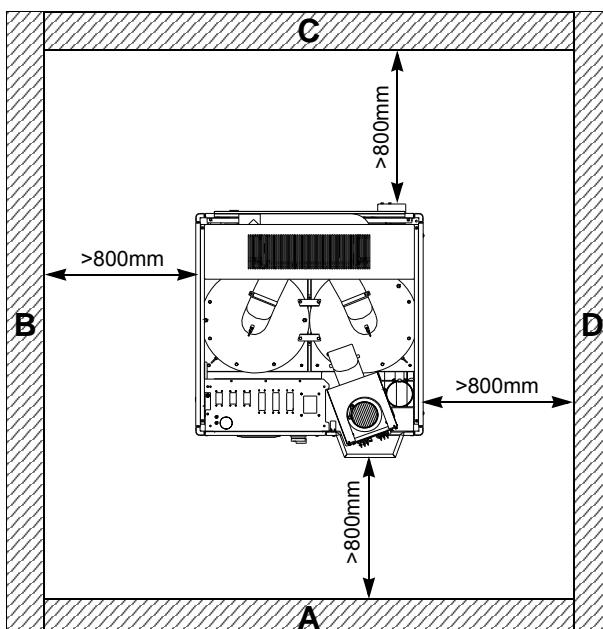


Fig. 5

6.2. Connection of process air pipes

The dryer may be fitted at origin with two types of connection:

- X** for a rigid pipe, with connection by means of a quick clamp and sealing gasket;
- Y** for a flexible pipe, with adapting stub.

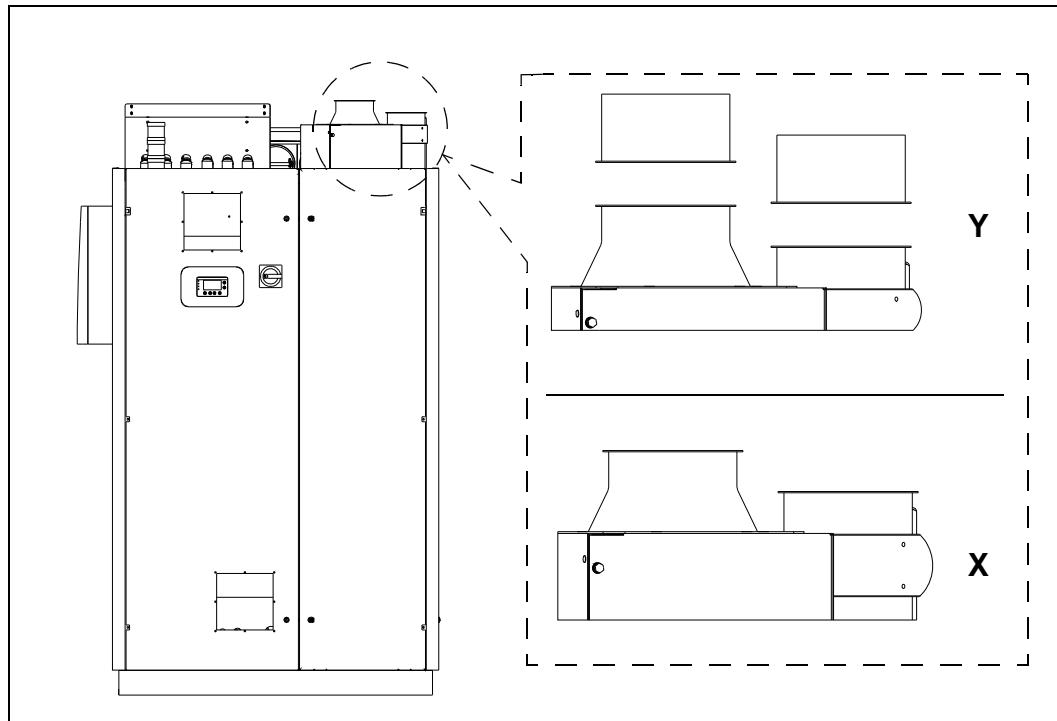


Fig. 6

6.3. Cooling connection

1. Install a 5µm filter at the coolant drawing point.
2. Remove the plugs protecting the cooling battery inlet and outlet.
3. Install a pair of hoses between the coolant outlet / inlet pipes and the respective attachments of the machine in order to isolate the parts from any vibration.
It is advisable to use quick connectors between the coolant outlet / inlet pipes and the machine; use specific sealants to ensure the seal of the hydraulic connections.
4. Connect the coolant supply pipe to the connection **07** (see **Fig. 7 - Page 17**).
5. Connect the coolant discharge pipe to the connection **06**.

For the characteristics of the coolant, see *Chap. 2. - Page 7*.



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KEY

	Loading blower A connecting cables entry	03	Power cable entry
02	Loading blower B connecting cables entry	05	Compressed-air supply inlet quick-release connector
	Vacuum receiver B connecting cables entry	06	Coolant discharge outlet
		07	Coolant supply inlet
04	Hopper A connecting cables entry	HA1	Alarm signalling audible / visual device
	Hopper B connecting cables entry	XS	Serial connections
	Mould dryer connecting cables entry		

XS HA1 02 04 03

06 07

07

06

Ø 8 plastic supply hose from supply line, to be provided by customer

05

Rapid coupling joint, supplied by client

Fig. 7

6.4. Compressed air line connection

1. Install a compressed air filter between the supply and the machine: the filter must have a transparent condensate collection bowl, for controlling the quality of the air supplied.
2. Do not connect other users between the compressed air supply line and the machine.
3. Connect the compressed air line to the quick-release connector **05** (see **Fig. 7 - Page 17**).

For the compressed air characteristics, see *Chap. 2. - Page 7* and following.

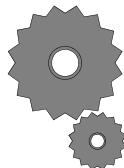
6.5. Conveying conditioning discharge



CAUTION

Risk of damaging the machine in case of non-evacuation of the condensate from the electric panel.

- Execute the piping with a slope to prevent condensate or liquids stagnating.



ATTENTION

When carrying out the following operations, take care not to let nuts and bolts (or other items) get inside the pipes.

If there is a conditioning system for the electric panel, the discharge **17** (see **Fig. 8 - Page 18**) takes out the condensate that forms.

If you want to convey the condensate outside the building, just connect a suitable flexible pipe to the discharge **17** with a metal clamp.

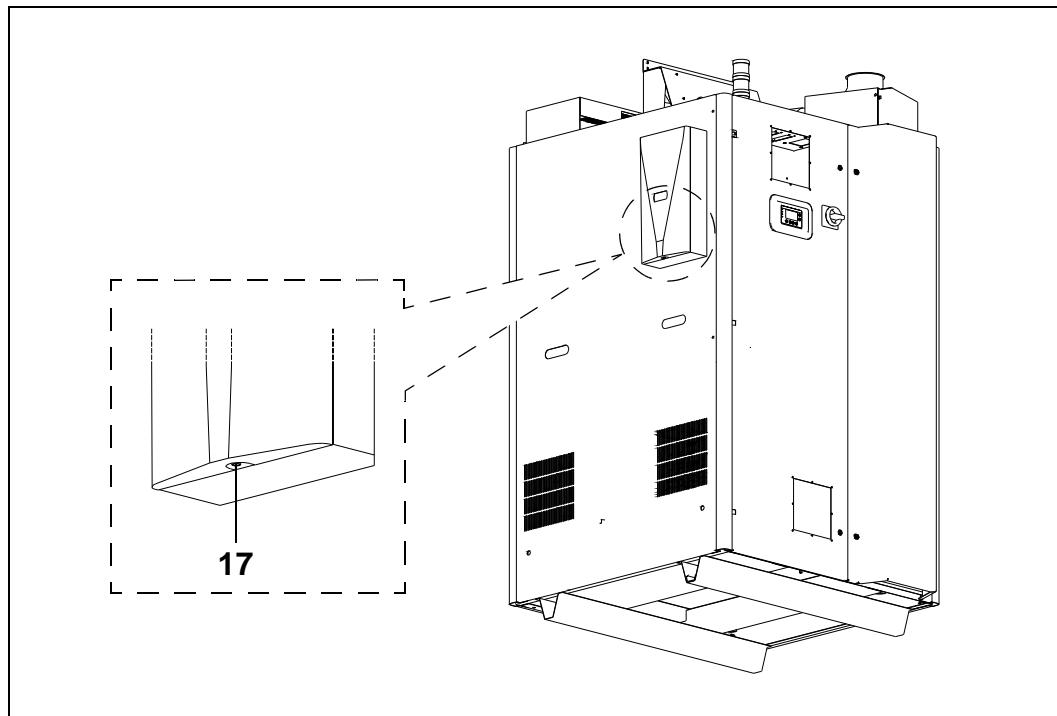


Fig. 8

6.6. Regeneration discharge pipe



WARNING

Burning hazard.

- ▶ Pay special attention and always wear suitable personal protective equipment!
- ▶ Make sure the regeneration discharge steam cannot cause injury to persons or damage things.



CAUTION

Risk of damaging the machine in case of non-evacuation of the regeneration discharge steam.

- ▶ Use pipes resistant to working temperatures above 300°C (572°F).
- ▶ Execute the piping with a slope to prevent condensate or liquids stagnating.
- ▶ Make sure the regeneration discharge steam is correctly evacuated and to a suitable place.



ATTENTION

When carrying out the following operations, take care not to let nuts and bolts (or other items) get inside the pipes.

The regeneration outlet **08** (see **Fig. 9 - Page 19**) conveys fumes from the machine to the exhaust.

If you want to make a special pipeline to convey them outside the building, just connect a pipeline (**09**) to the outlet **08** with metal clamps. The pipe must face downward.

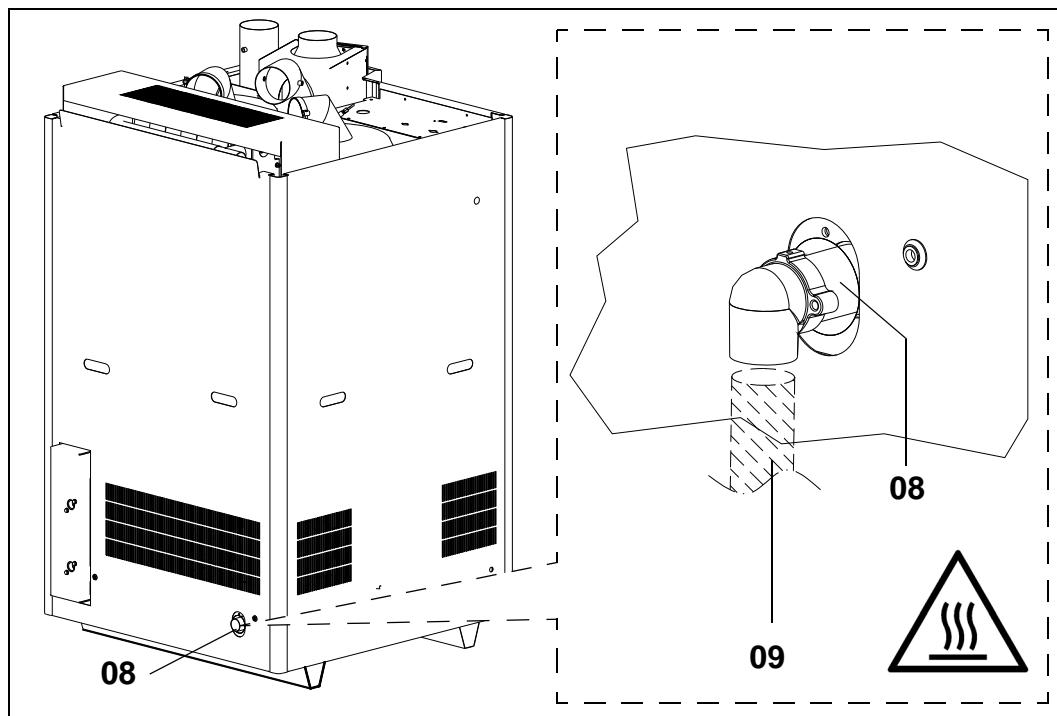


Fig. 9

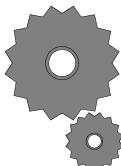
6.7. Electrical connections



WARNING

Electric shock hazard.

- To supply the machine, use an electric cable of suitable cross-section for the total power of the machine (see *Chap. 2. - Page 7*).



ATTENTION

Suitable protection for the total power of the machine must be installed at the point of connection to the electric mains.

The use of protection fuses is recommended: follow the instructions given in the attached *wiring diagram*.

In addition, install a main circuit breaker switch between the electricity line and the machine power supply lead; it must be installed in an easily accessible position.

To insert the power cable, use the entry **03** (see **Fig. 7 - Page 17**).

The connection between the machine and the main power panel must be done following the indications given on the *wiring diagram*.

7. Starting the machine

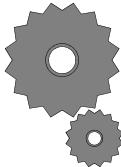
7.1. Preliminary checks

The preliminary checks must be performed every time the machine is about to be started up:

1. Make sure the compressed-air hoses are connected and that the pressure value is correct (see *Chap .2. - Page 7* and subsequent).
2. Make sure the coolant pipes are connected and that the pressure is correct (see *Chap. 2. - Page 7* and subsequent).
3. Check that the process pipes/hoses are correctly connected.
4. Check that the regeneration discharge has been executed as described in *Par. 6.6. - Page 19*.

After carrying out the preliminary checks, the machine can be started up.

7.2. First start-up



ATTENTION

Follow the “first start-up” procedure only when the machine is being started for the first time or after a long period of disuse.

The procedure will remove all the moisture accumulated by the drying towers in the machine in the period of inactivity and must be performed when there is no material in the hopper.



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1. Power up the electric panel by turning the main switch **QS1**.
2. If the alarm appears:
[04: Err. phase seq. or Proc.blow.therm.sw],
follow the instructions given in *Chap. 16. - Page 80*.
3. Set 40°C (104°F) on parameter [Main Set Point],
(see *Par. 14.3. - Page 32*).
4. Set 10 units on parameter [Alarm dev.].
5. Press the  key for at least 2 seconds (the indicator  lights up) and leave the machine running for at least eight hours so as to ensure the drying towers are fully regenerated.

7.3. Routine start-up

1. Power up the electric panel by turning the main switch **QS1**.
2. Set the required value on parameter [Main Set Point],
(see *Par. 14.3. - Page 32*).
3. It is advisable to set a value of at least 10 units on parameter [Alarm dev.].
4. Press the  key for at least 2 seconds (the indicator lights up 

8. Stopping the machine



WARNING

To stop the machine in an emergency, turn the main switch **QS1** (see Fig. 4 - Page 13): use this procedure only when strictly necessary and not as a routine operation.

- Wait until the machine has cooled down to room temperature before working on internal parts.

To stop the machine proceed as follows:

1. Press the  key for at least 2 second (the indicator  flashes): the machine will not stop immediately, the cooling stage will commence. In this stage the blower **M1** sends air at ambient temperature into the hopper to eliminate the heat of the plastic granules and of the machine at the same time. The machine stops after the time set on the parameter [Cooling time] has elapsed (see *Par. 15.2. - Page 50*).
2. Turn switch **QS1** and cut off power to the machine.

9. Maintenance

Safety rules for adjustment, servicing and troubleshooting procedures

1. All adjustment, maintenance and troubleshooting work must be performed by specialised personnel. Specialised personnel are construed as persons who, because of their education, experience, training, and specific knowledge of accident prevention regulations and first aid, have been authorised to carry out checking and preventive maintenance work. These personnel must be provided with all the tools and equipment specified in both local and international accident prevention regulations.
2. Thorough inspections, performed at regular intervals, are required to prevent breakdowns and guarantee that the machine works at maximum efficiency through the course of time.
3. Unless expressly stated otherwise, all maintenance and adjustment work on the machine, or parts of it must be performed with the machine completely isolated from the electricity, compressed air and water supply sources.
4. Cordon off the work zone with tape and put up notices warning of the hazards in the areas where the adjustment, maintenance or troubleshooting work is taking place.
5. Wait until the machine and the parts that must be approached have cooled down to ambient temperature before performing any maintenance tasks. Drain off and remove any liquids inside the machine to prevent them from coming into contact with live electrical parts during the maintenance work.
6. To avoid injuring persons or damaging objects, make sure that no solids, liquids or gases are discharged or disposed of in the environment. Have these substances removed in suitable containers, in accordance with the binding waste disposal regulations in the place of installation.
7. If any breakdowns occur that the operator is unable to remedy, switch off the machine and contact the PIOVAN Technical Service Department or an authorised service centre.
8. On completing the maintenance work, switch on the machine and perform the operational checks, taking all the necessary precautions. The above-indicated precautions must not be waived until the maintenance work is fully completed.
9. Take special care to ensure that the maintenance work does not involve other nearby machines which could represent a potential source of danger.

Scheduled maintenance must be performed on a regular basis to guarantee the maximum efficiency of the machine.

SCHEDULED MAINTENANCE
(see Fig. 10 - Page 24)

Every day	Clean the process and regeneration filters: follow the instructions in <i>Par. 9.2. - Page 23.</i>	 STOP Machine off
Every month	Clean the process and regeneration cooling batteries: follow the instructions in <i>Par. 9.3. - Page 25.</i>	
	Check that the conditioning discharge of the electric panel is free from obstacles or blockages.	
Every 3 months	Check the state of all the pipes, wiring and solenoid valves inside the machine.	
Every 6 months	Check and if necessary replace all the machine filters.	
	Check the tightness of the electric terminals.	
Every 12 months	Have the Dew Point measurement probe calibrated (where applicable): contact the PIOVAN Technical Assistance Service.	

9.1. Particular checks in case of moulding problems

If moulding problems occur and the machine does not signal any faults, proceed with the following checks:

1. Make sure the process air temperature set on the parameter [Main Set Point], (see *Par. 15.2. - Page 50*) is that recommended by the producer of the material.
2. Check that the plastic material stays in the hopper long enough to be completely dried.
3. Check the cleanliness of the filters inside the machine.
4. Check the good condition of all the process air pipes.
5. Make sure there are no leaks in the cooling battery.
6. Check that the process and regeneration box exchange occurs regularly.
7. Check the efficiency of the heating resistances and the relevant contactors.

9.2. Cleaning filters


WARNING

Burning hazard.

- ▶ Wait until the machine has cooled down to room temperature before working on internal parts.
- ▶ Pay special attention and always wear suitable personal protective equipment!

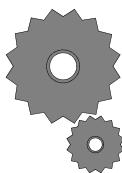

CAUTION

Risk of damaging the machine.

- ▶ Replace the filters immediately if worn or damaged: using the machine with damaged filters will rapidly clog cooling battery.



PIOVAN



ATTENTION

Change the used filter cartridge with a clean one (to be set up next to the machine). Set aside the used cartridge for cleaning afterwards.

When cleaning parts, always use an industrial vacuum cleaner and perform the work in a suitable place.

Never use compressed air. After cleaning, store the filter cartridges in a clean, dry place.

Both filters installed (see Fig. 10 - Page 24) can be replaced according to the following procedure:

9.2.a. Cleaning process filter

1. Make sure the machine is switched off and disconnected from the power supply, compressed air and coolant supplies.
2. Unscrew the outer knobs **13** (or handwheel) and remove the cover **12** of the process filter.
3. Unscrew the inner knobs **11** and take out the cartridge **15**.
4. Insert the replacement cartridge (new or clean), turning it slightly to stop it sticking, and make sure the seal completely adheres to the bottom of the receiver.
5. Tighten the inner knobs, refit the filter cover on the filter and tighten the outer knobs (or handwheel).

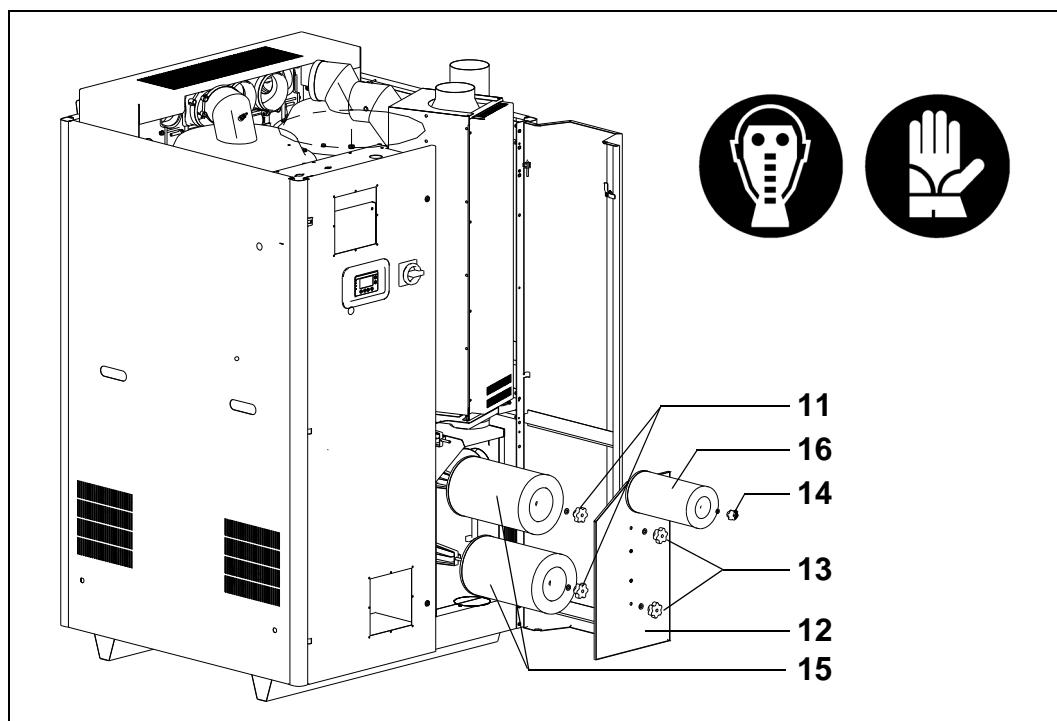


Fig. 10

9.2.b. Cleaning regeneration filter

1. Make sure the machine is off and disconnected from the power lines, compressed air and cooling liquid intake.
2. Unscrew the outer knob **14** and remove the cartridge **16** of the regeneration filter.
3. Insert the spare cartridge (new or clean) twisting it slightly to flatten it and taking care to make it adhere completely to the gasket on the bottom of the container.
4. Tighten the outer knob.

9.3. Cleaning the cooling battery



WARNING

Electric shock hazard.

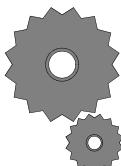
- ▶ Make sure there is no live equipment nearby.
-



CAUTION

Risk of damaging the machine.

- ▶ When carrying out the following operations, take care not to let nuts and bolts (or other items) accidentally get into the battery compartment: an event of this nature can damage the machine and impair its operation.
 - ▶ Do not open the coolant supply valves suddenly: a sudden and excessive change in pressure could damage the battery components.
-



ATTENTION

Change the dirty exchangers (inside the batteries) with clean ones (to be arranged near the machine), carrying out cleaning operations at a later stage.

Take every precaution to prevent spilling fluids into the environment. Any waste fluids must be disposed of in full compliance with current regulations in the country where the machine is installed.

All the installed batteries (see **Fig. 11 - Page 26** and **Fig. 12 - Page 27**) can be replaced according to the following procedure:

9.3.a. Cleaning process cooling batteries

1. Make sure that the machine is switched off and disconnected from the electricity and compressed air supply lines.
2. Completely close the coolant supply valves.
3. Arrange a receiver with capacity of at least 3 litres to collect the residual liquid in the battery.
4. Remove panel **18a**: unhook the two fasteners **17a** and lift it with the handles.
5. Disconnect the hoses from the cooling battery **19** and place them in the receiver.
6. Wait for the cooling battery to drain completely.
7. Unscrew the screws **20** on the exchanger **19**.
8. Remove the exchanger **19** from its seat, taking care not to bend the cooling fins.
9. Carry out cleaning, following the instructions in *Par. 9.3.c. - Page 27*.
10. Check the state of the seals: replace them if necessary (an inadequate seal reduces machine performance).
11. Check the hydraulic seal of the exchanger before refitting it.
12. Insert the replacement exchanger (new or clean) and tighten the screws **20**.
13. Connect the hoses to their quick-fitting connectors.
14. Gradually open the coolant supply valves.

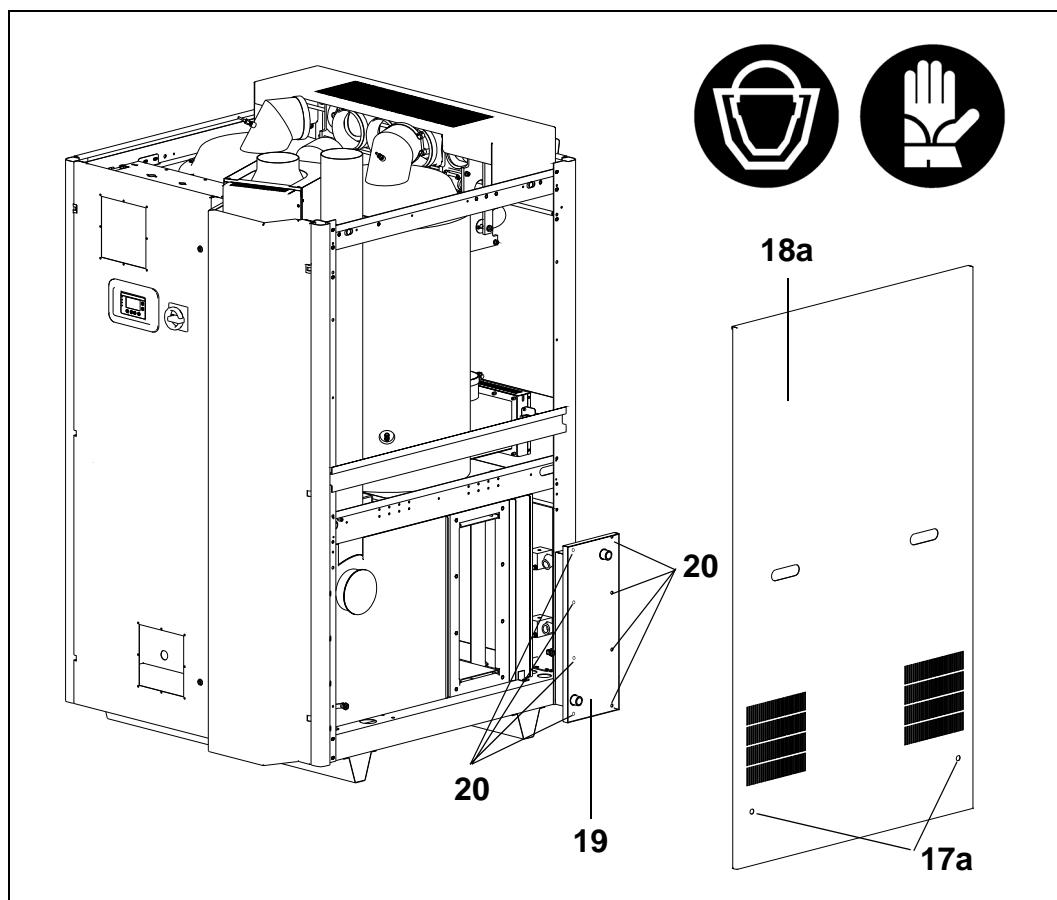


Fig. 11

9.3.b. Cleaning the regeneration cooling batteries

1. Make sure the machine is off and disconnected from the power lines, compressed air and cooling liquid intake.
2. Close the cooling liquid intake valves completely.
3. Provide a recipient with a capacity of at least 3 liters to collect the residual liquid in the battery.
4. Remove the panel **18b**: unhook the two fasteners **17b** and lift it using its handles.
5. Disconnect the hoses from the cooling battery **21** and place them in the recipient.
6. Allow the cooling battery to drain completely.
7. Unscrew the handwheels **22** on the exchanger **21**.
8. Remove the exchanger **21** from its housing, taking care not to bend the cooling fins.
9. Clean as instructed in *Par. 9.3.c. - Page 27*.
10. Check the conditions of the sealing gasket: if necessary replace it (a poor seal reduces the machine output).
11. Check the hydraulic seal of the exchanger before returning it to its housing.
12. Install the spare exchanger (new or clean) and tighten the handwheels **22**.
13. Fasten the hoses to their connectors.
14. Gradually open the cooling liquid intake valves.

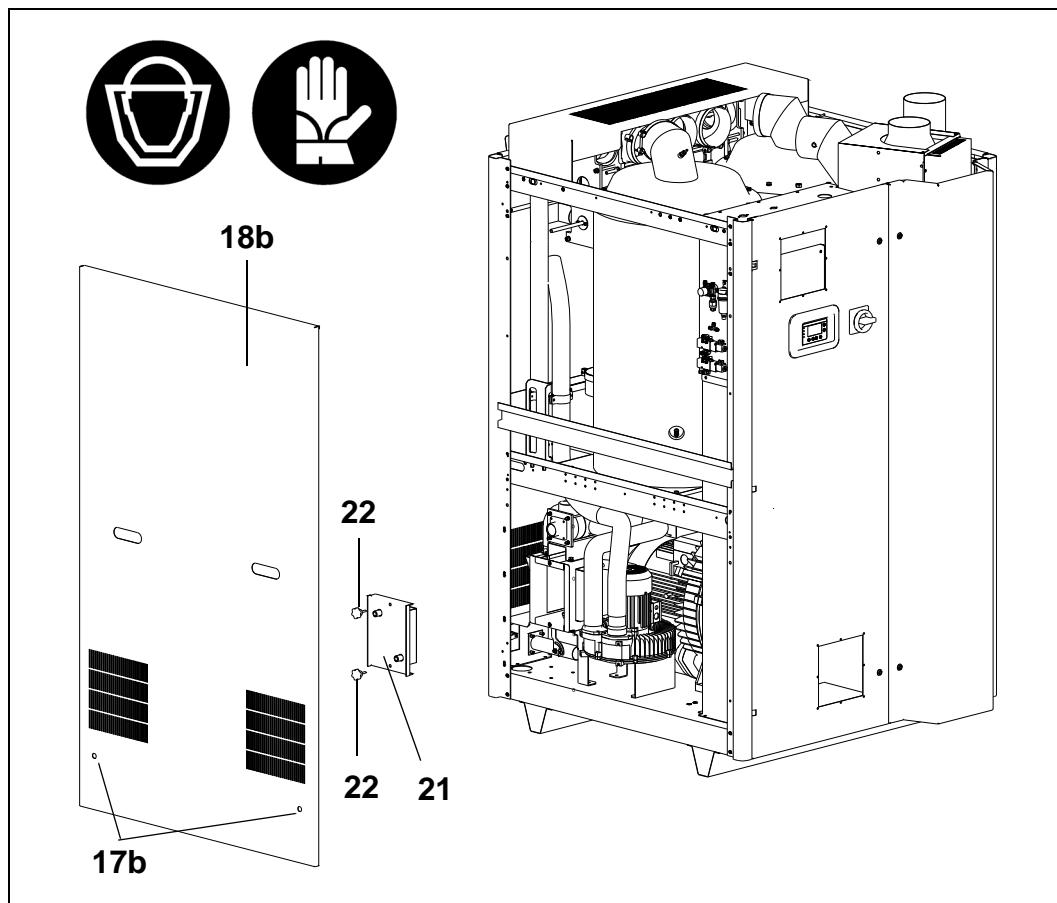
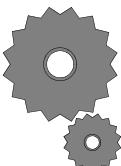


Fig. 12

9.3.c. Cleaning the heat exchanger



ATTENTION

Do not use corrosive or pollutant substances.

When performing the following operations, take care not to bend the outer fins of the exchanger.

Immerse the battery in a bath of ethylene glycol: immersion must be long enough to dissolve the dirt deposited on the outside fins.

After this stage, rinse with plenty of warm water.

10. Decommissioning the machine

When the machine's life cycle comes to an end, it must be disconnected from the electrical and pneumatic supply sources and uninstalled from its work station. The machine must be disposed of in full compliance with the waste disposal laws in the country where it is installed.



ATTENTION

After having removed the machine from its working position, permanently affix to it a notice with the message: "MACHINE TO BE SCRAPPED: DO NOT USE".

11. Spare parts

To reduce machine downtimes caused by worn or broken parts to a minimum, we advise you to keep a reserve stock of all the spare parts marked * in the spare parts list.

The following details must always be given when ordering spare parts:

1. All the data on the identification plate affixed to the machine (see **Fig. 13 - Page 28**).
2. The reference number and part number of the requested part (see *tables of spare parts*).
3. A description of the requested part and an indication of the quantity required.
4. The exact address and requested forwarding method.

PIOVAN S.p.A. declines all liability for incorrect consignments resulting from inaccurate or incomplete information.

12. Identification plate

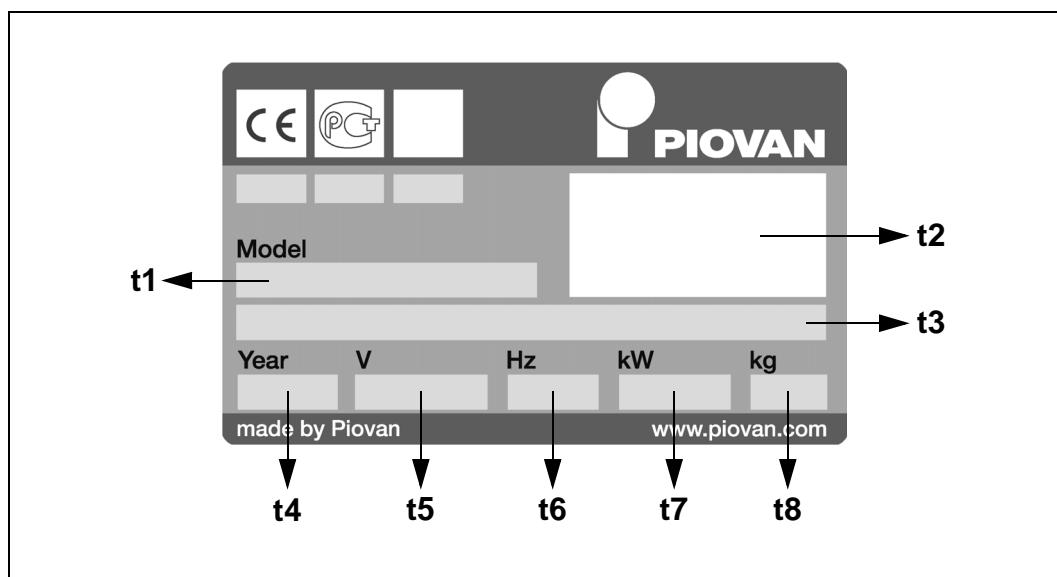


Fig. 13

KEY	
t1	Model.
t2	Bar code and equipment number.
t3	Additional information (if available).
t4	Year of manufacture.
t5	Power supply voltage.
t6	Power supply frequency.
t7	Total power installed.
t8	Total weight with accessories.



CONTROL PANEL

PET Series

13. Panel description

LED:	Steady light	Flashing light
Key:	Main function	Secondary function
	Machine alarm (block)	Machine alarm (warning)
	Machine in work phase	Machine in cooling phase
	Machine in regeneration heating phase	Machine in regeneration cooling phase
	Machine connected to supervision system	
	Shut off of acoustic alarm warning devices	
	Return to previous menu	Exit modifications
	Enable selection	Confirm changes
	Off / On (press and hold for more than 2s)	
	Move selection up	Alphanumeric value increase
	Move selection down	Alphanumeric value decrease

14. Panel use

14.1. Main page

When the machine is switched on, the panel displays the following:
 (the numerical values displayed are guideline only)

	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	

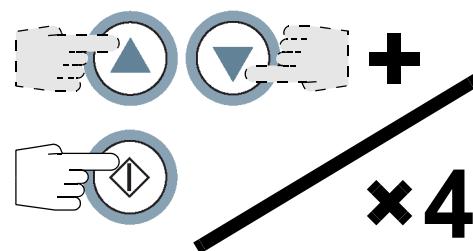
- ▶ Time display (if clock is present)
- ▶ Process air temperature
- ▶ Required temperature value
- ▶ Process air Dew Point value
- ▶ Level of material currently contained in the hopper
- ▶ Access to main menu

14.2. Password entry

Access to the menus is controlled by 2 password levels.

On access to a protected menu, the following page is displayed:

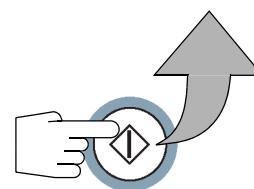
PASSWORD
Insert password of desired level:
_XXX



Enter the password, selecting and confirming one digit at a time.

If the password entered is incorrect, the following message is displayed:

PASSWORD	
Insert password of desired level:	
_XXX	
! WRONG PASSWORD!	
Insert ENTER and new password or ESC	



The following symbols will be used to indicate when a password is required:



Password defined values are:

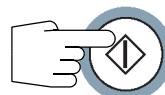
- Level 1 = 1234
- Level 2 = 5678

To disable a password, set the relative value to 0000.

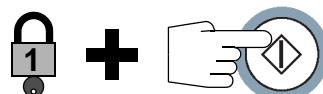
14.3. Direct Set Point entry

The operating set point value can be modified directly from the main menu:

	12.00
Process temperat.	119.7°C
Main Set Point	120.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	



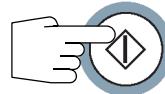
PASSWORD
Insert password
of desired level:
_XXX



	12.00
Process temperat.	119.7°C
Main Set Point	120.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	



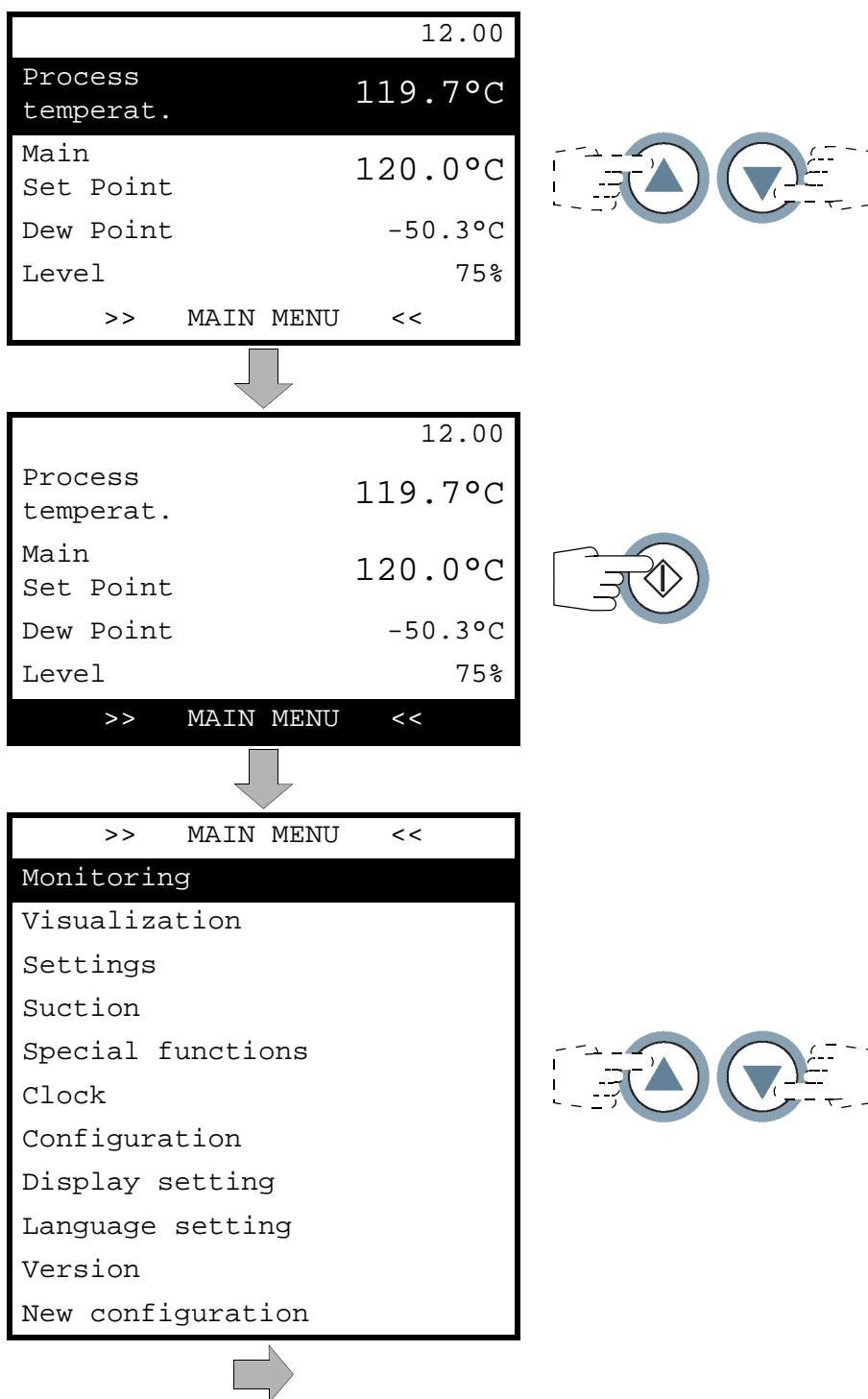
	12.00
Process temperat.	119.7°C
Main Set Point	125.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	



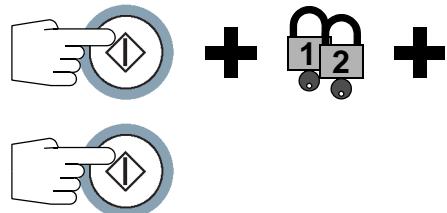


	12.00
Process temperat.	119.7°C
Main Set Point	125.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	

14.4. Page selection



>> MAIN MENU <<	
Monitoring	
Visualization	
Settings	
Suction	
Special functions	
Clock	
Configuration	
Display setting	
Language setting	
Version	
New configuration	



↓

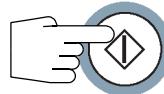
>> SETTINGS <<	
Main Set Point	120.0 °C
Alarm dev.	15.0 °C
High deviation	10.0 °C
Low deviation	10.0 °C
Cooling time	15min
Energy Saver	0
DP control	---.- °C
DP alarm	---.- °C
Gradient	100 °C/min
Start type	2
Metering unit	°C

14.5. Modify data

>> SETTINGS <<		
Main Set Point	120.0 °C	
Alarm dev.	15.0 °C	
High deviation	10.0 °C	
Low deviation	10.0 °C	
Cooling time	15min	
Energy Saver	0	
DP control	---.- °C	
DP alarm	---.- °C	
Gradient	100°C/min	
Start type	2	
Metering unit	°C	



>> SETTINGS <<		
Main Set Point	120.0 °C	
Alarm dev.	15.0 °C	
High deviation	10.0 °C	
Low deviation	10.0 °C	
Cooling time	15min	
Energy Saver	0	
DP control	---.- °C	
DP alarm	---.- °C	
Gradient	100°C/min	
Start type	2	
Metering unit	°C	

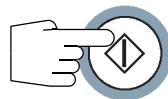


>> SETTINGS <<		
Main Set Point	120.0 °C	
Alarm dev.	15.0 °C	
High deviation	10.0 °C	
Low deviation	10.0 °C	
Cooling time	15min	
Energy Saver	0	
DP control	---.- °C	
DP alarm	---.- °C	
Gradient	100°C/min	
Start type	2	
Metering unit	°C	





>> SETTINGS <<	
Main Set Point	120.0 °C
Alarm dev.	15.0 °C
High deviation	12.5 °C
Low deviation	10.0 °C
Cooling time	15min
Energy Saver	0
DP control	---.- °C
DP alarm	---.- °C
Gradient	100 °C/min
Start type	2
Metering unit	°C



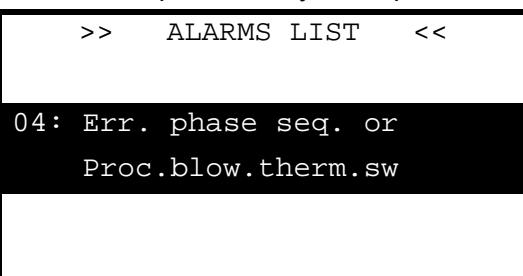
Downward arrow indicating selection from the first screen to the second.

>> SETTINGS <<	
Main Set Point	120.0 °C
Alarm dev.	15.0 °C
High deviation	12.5 °C
Low deviation	10.0 °C
Cooling time	15min
Energy Saver	0
DP control	---.- °C
DP alarm	---.- °C
Gradient	100 °C/min
Start type	2
Metering unit	°C

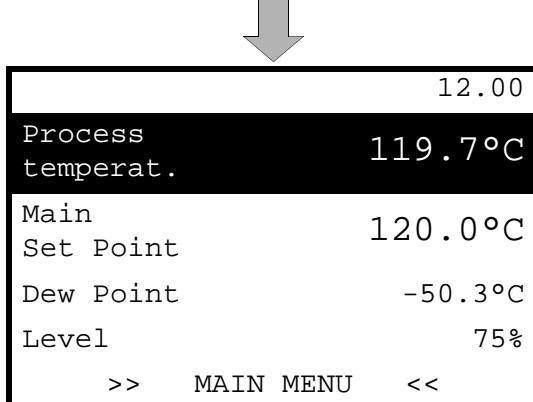
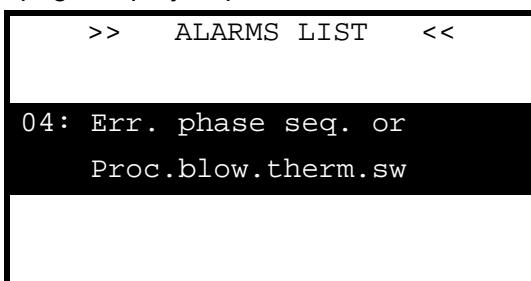
14.6. Alarm reset

When an alarm signal is activated, the panel displays the following, the display becomes red and the alarm led flashes.

Press the specified key to stop the alarm siren.



If the cause of alarm has been removed, press the key again to return to the page displayed prior to the alarm.





If the cause of the alarm has *not* been removed, press the specified key to return to the page displayed prior to the alarm.

>> ALARMS LIST <<
04: Err. phase seq. or Proc.blow.therm.sw



12.00	
Process temperat.	119.7°C
Main Set Point	120.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	

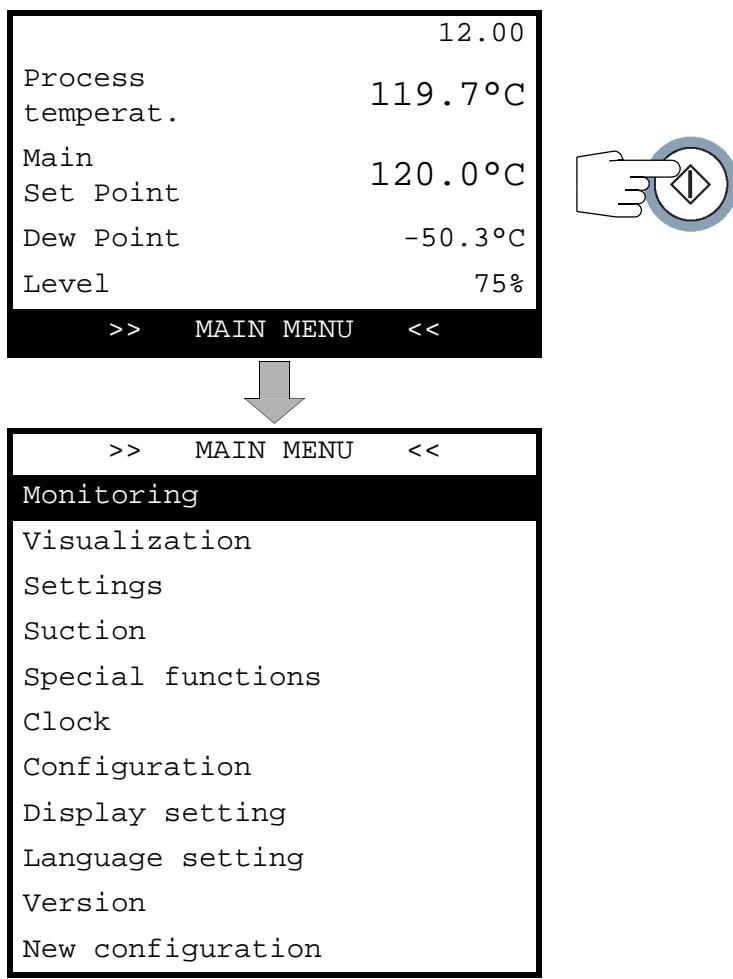
Press the specified key to display the page of alarms in progress.

12.00	
Process temperat.	119.7°C
Main Set Point	120.0°C
Dew Point	-50.3°C
Level	75%
>> MAIN MENU <<	



>> ALARMS LIST <<
04: Err. phase seq. or Proc.blow.therm.sw

15. Main Menu

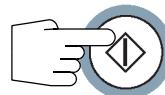


Main Menu		
Monitoring	Return to main page	► Par.14.1. - Page 31
Visualization	Displays operating values	► Par.15.1. - Page 42
Settings	Sets work parameters	► Par.15.2. - Page 50
Suction	Sets receiver parameters	► Par.15.3. - Page 52
Special functions	Sets the additional functions	► Par.15.4. - Page 56
Clock	Sets programmed operation parameters	► Par.15.5. - Page 60
Configuration	Sets operating parameters	► Par.15.6. - Page 66
Display setting	Sets display parameters	► Par.15.7. - Page 74
Language setting	Sets the display language	► Par.15.8. - Page 76
Version	Displays the software version	► Par.15.9. - Page 78
<i>New configuration</i>	<i>NON OPERATIVE</i>	

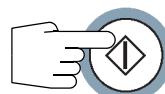
15.1. Visualization Menu

15.1.a. Temperatures Menu

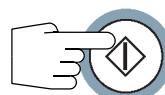
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



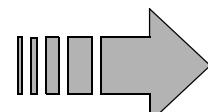
>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



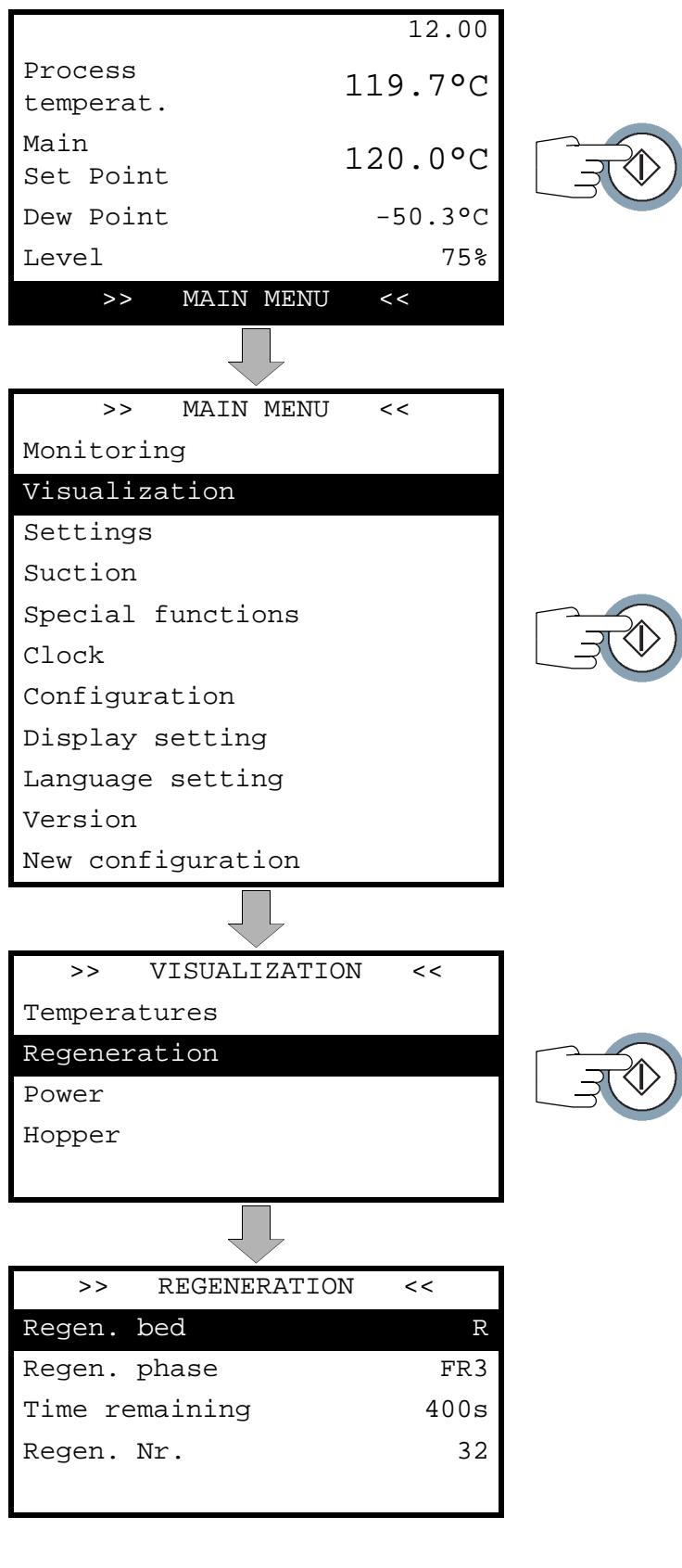
>> VISUALIZATION <<
Temperatures
Regeneration
Power
Hopper



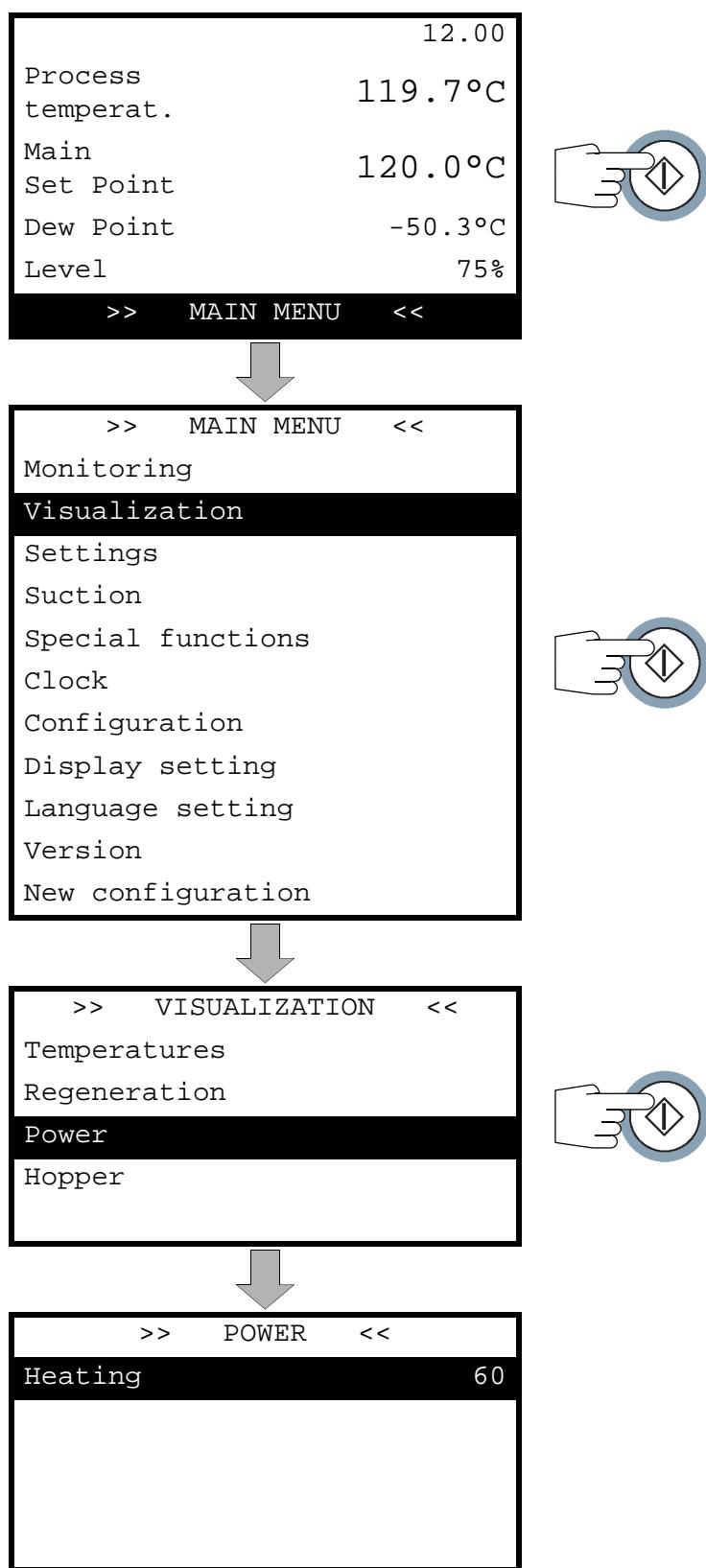
>> TEMPERATURES <<
Active SP 120.0 °C
Material 65.0 °C
Left bed in 45.0 °C
Right bed in 290.0 °C
Left bed out 50.0 °C
Right bed out 140.0 °C
Bed inlet 46.0 °C
Regen.Blow.Out 41.0 °C
Safety temp. 119.7 °C
Hop.blow.out 66.0 °C
Split blow.out 68.0 °C



<i>Temperatures Menu</i>	
Active SP	Real work Set Point
Material	Hopper cone material temperature
Left bed in	Left regeneration bed inlet air temperature
Right bed in	Right regeneration bed inlet air temperature
Left bed out	Left regeneration bed outlet air temperature
Right bed out	Right regeneration bed outlet air temperature
Bed inlet	Process blower outlet air temperature
Regen.Blow.Out	Regeneration blower outlet air temperature
Safety temp.	Hopper inlet air temperature
Hop.blow.out	Main hopper transport blower outlet air temperature
Split blow.out	Secondary hopper transport blower outlet air temperature

15.1.b. Regeneration Menu


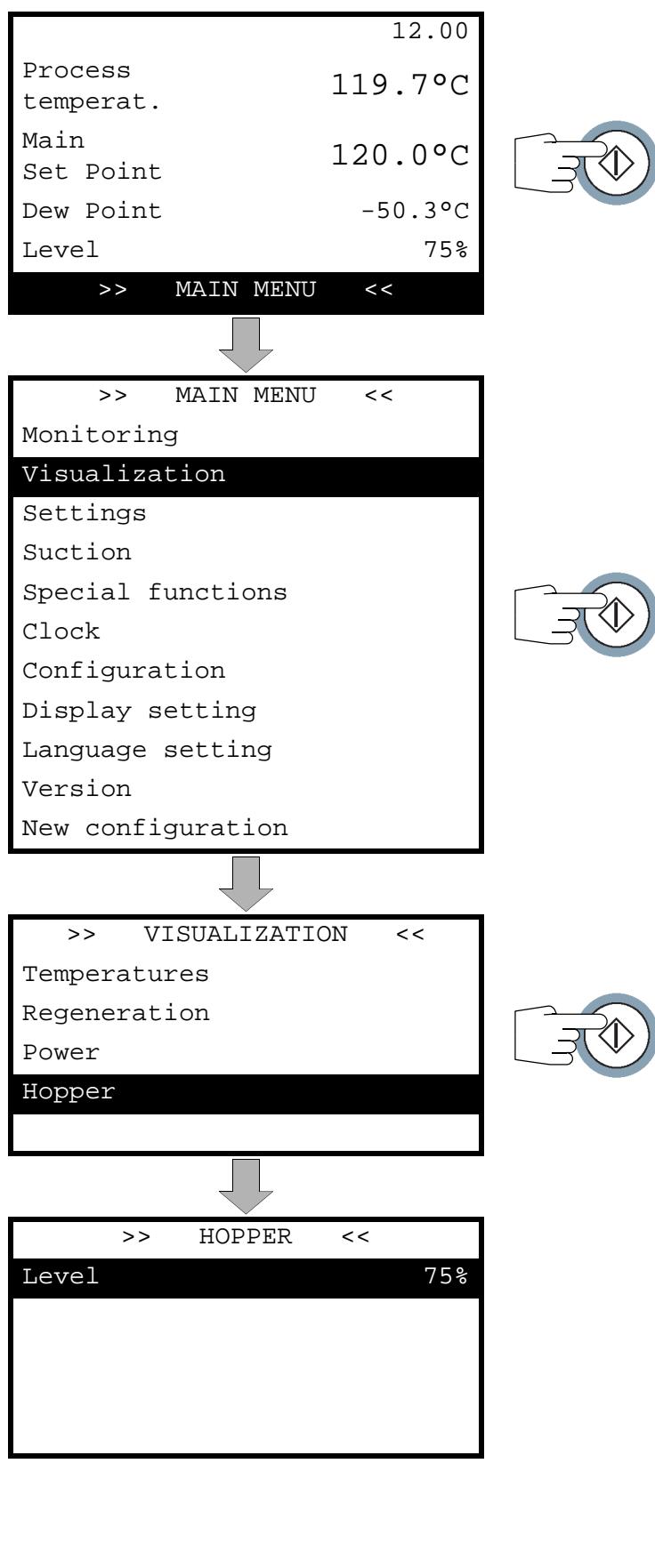
<i>Regeneration Menu</i>	
Regen. bed	Bed in regeneration phase: • L = left bed • R = right bed
Regen. phase	Regeneration phase in progress: FR0 <i>Left</i> regeneration bed: heating phase F1A <i>Left</i> regeneration bed: ambient cooling phase FR1 <i>Left</i> regeneration bed: dynamic cooling phase FR2 <i>Left</i> regeneration bed: static cooling phase FR3 <i>Right</i> regeneration bed: heating phase F4A <i>Right</i> regeneration bed: ambient cooling phase FR4 <i>Right</i> regeneration bed: dynamic cooling phase FR5 <i>Right</i> regeneration bed: static cooling phase
Time remaining	Time pending completion of current phase
Regen. Nr.	Total regenerations counter (total of two beds)

15.1.c. Power Menu




Power Menu

Heating	Percentage of power used for process air heating
---------	--

15.1.d. Hopper Menu


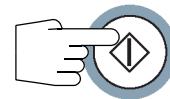


Hopper Menu

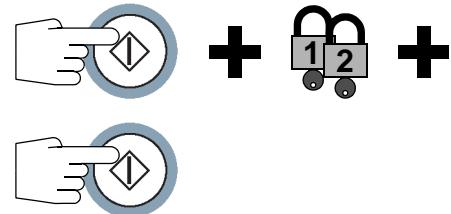
Hopper	Level of material currently contained in the hopper
--------	---

15.2. Settings Menu

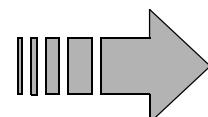
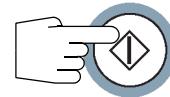
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



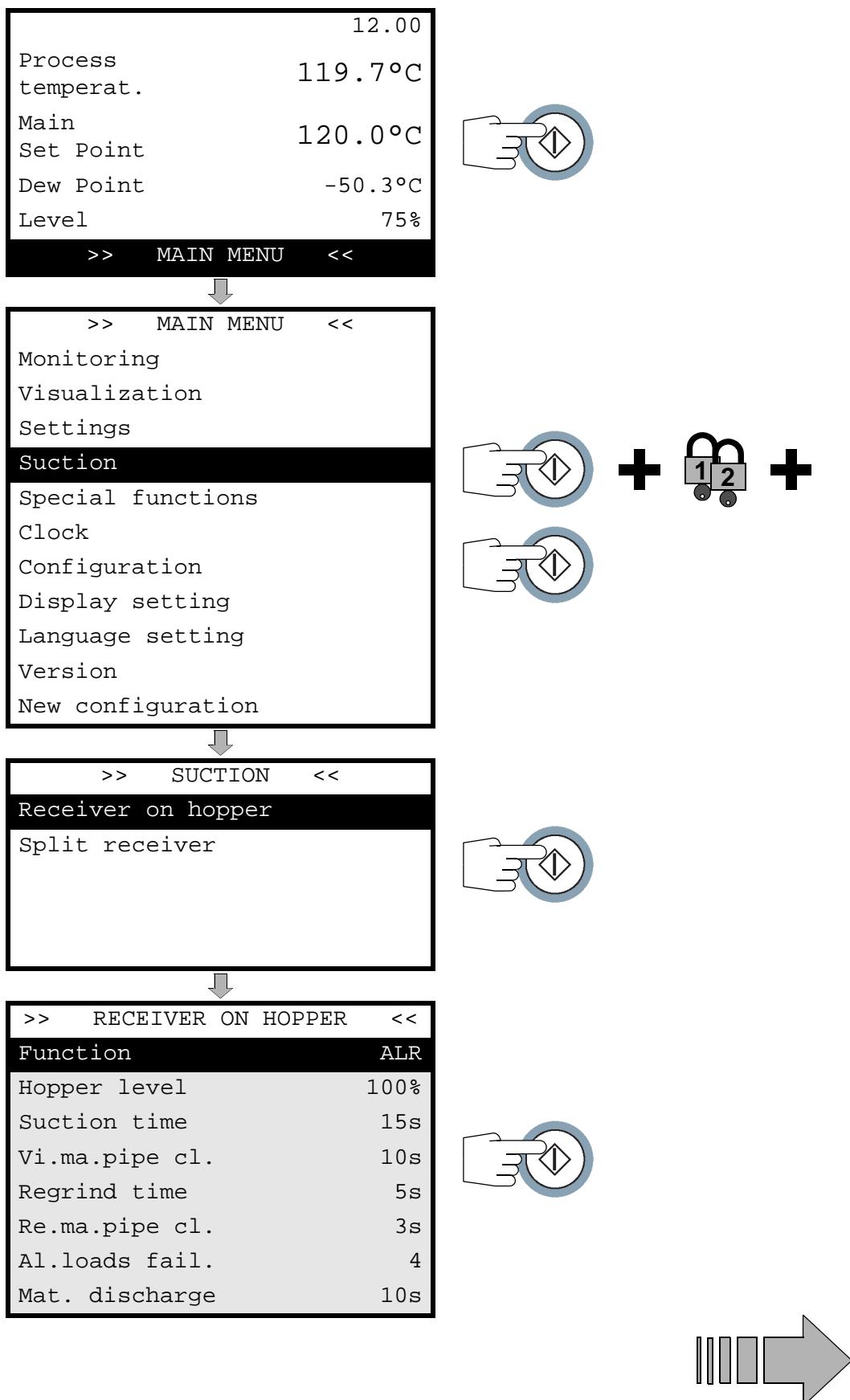
>> SETTINGS <<
Main Set Point 120.0 °C
Alarm dev. 15.0 °C
High deviation 10.0 °C
Low deviation 10.0 °C
Cooling time 15min
Energy Saver 0
DP control ---.- °C
DP alarm ---.- °C
Gradient 100 °C/min
Start type 2
Metering unit °C



Settings Menu	
Main Set Point	Sets the required operating temperature
Alarm dev.	Sets the maximum safety deviation value above the Set Point
High deviation	Sets the maximum admissible deviation above the Set Point
Low deviation	Sets the maximum admissible deviation below the Set Point
Cooling time	Sets the require time interval for cooling of the dryer and material (period between the stopping command and effective shutdown of the machine)
Energy Saver	Sets the energy saving function in case of slow running machine use: 0 normal use ↓ 5 Maximum energy saving
DP control	Sets the Dew Point value for tower exchange: if the relative sensor is not fitted, this value has no meaning
DP alarm	Sets the Dew Point value above which the alarm trips: if the relative sensor is not fitted, this value has no meaning
Gradient	Sets the temperature increment factor to gradually reach the Set Point value The higher the value, the faster the machine reaches the operating temperature.
Start type	Sets the operating mode on start-up: 0 the machine remains stationary 1 the machine starts up automatically 2 the machine resumes operation as set when shut down
Metering unit	Selects the unit of measurement for display and settings of temperatures (°C / °F)

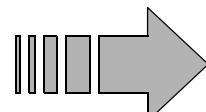
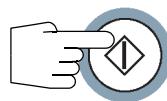
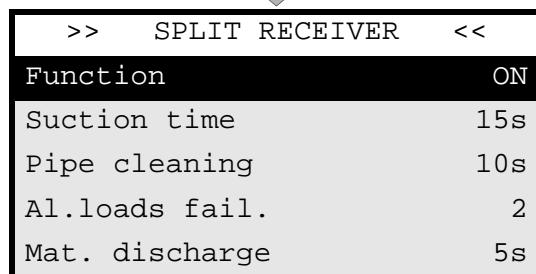
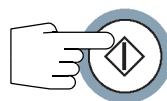
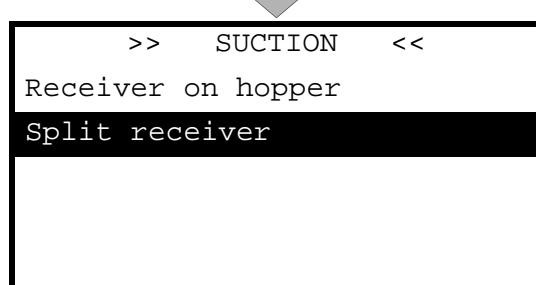
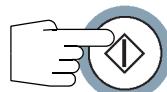
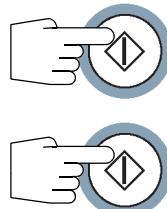
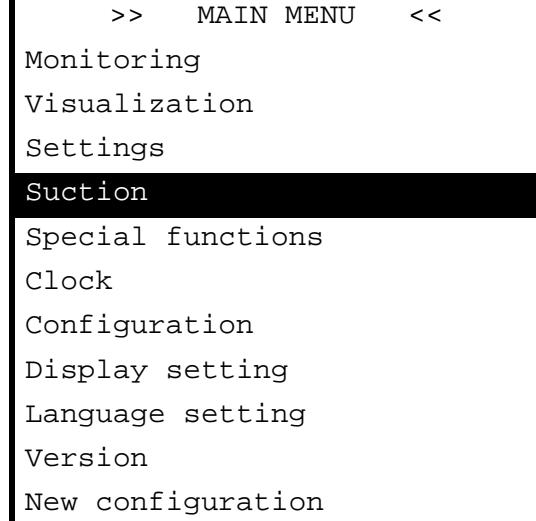
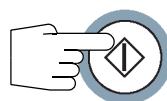
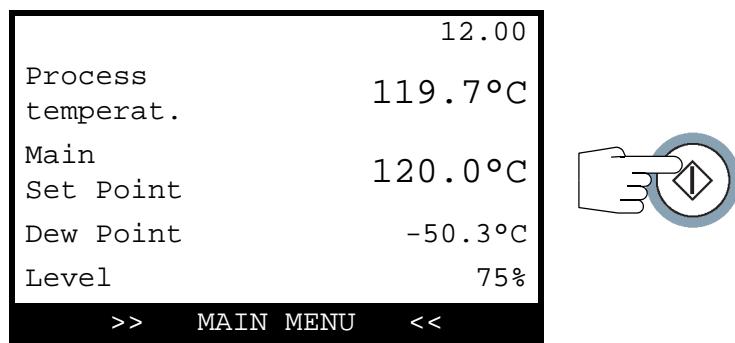
15.3. Suction Menu

15.3.a. Receiver on hopper Menu



Receiver on hopper Menu

Function		Sets the receiver operating mode: • OFF = disabled • ON = enabled • ALR = enabled with load failure alarm control
Hopper level		Sets the level of material to keep constant in the hopper
Suction time		Sets the duration of virgin material suction
Vi.ma.pipe cl.		Sets the duration of virgin material pipe cleaning
Regrind time		Sets the duration of reground material suction
Re.ma.pipe cl.		Sets the duration of reground material pipe cleaning
Al.loads fail.		Sets the number of material load failures before the relevant alarm signal
Mat. discharge		Sets the duration of material discharge and load failure alarm control

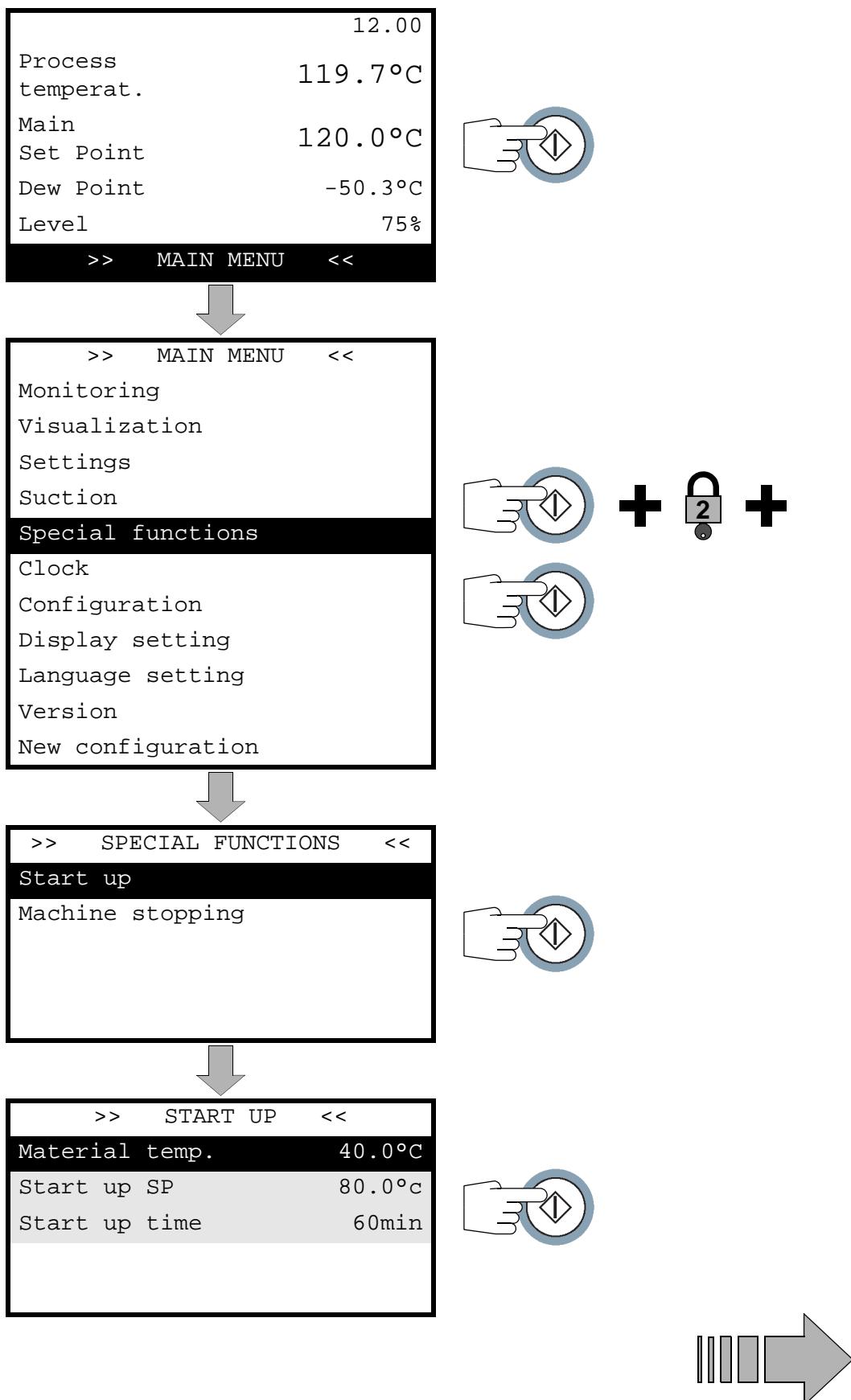
15.3.b. Split receiver Menu


Split receiver Menu

Function		Sets the receiver operating mode: • OFF = disabled • ON = enabled • ALR = enabled with load failure alarm control
Suction time		Sets the duration of virgin material suction
Pipe cleaning		Sets the duration of material pipe cleaning
Al.loads fail.		Sets the number of material load failures before the relevant alarm signal
Mat. discharge	Sets the duration of material discharge and load failure alarm control	

15.4. Special functions Menu

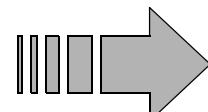
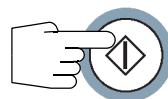
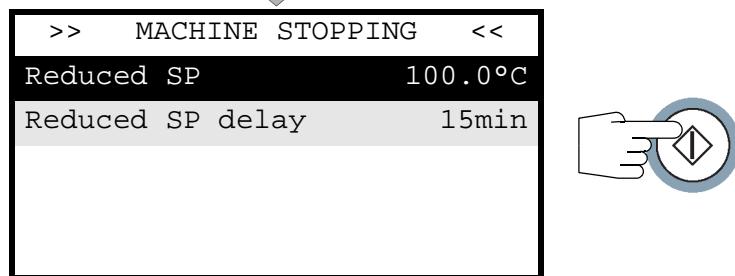
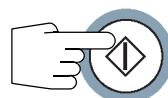
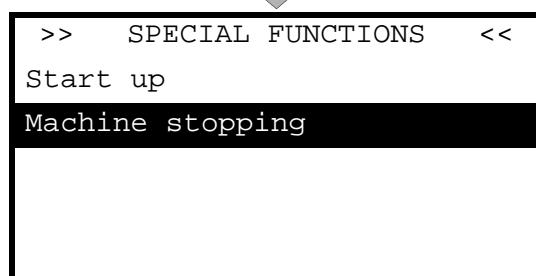
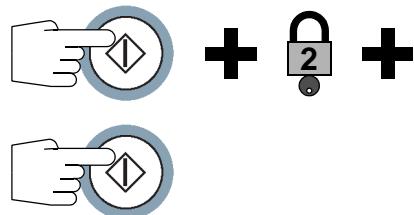
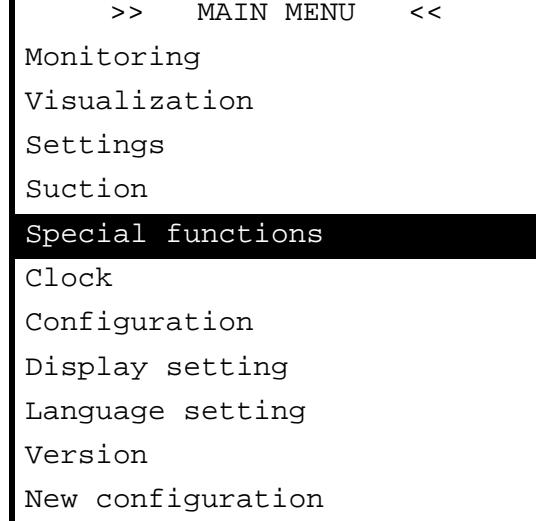
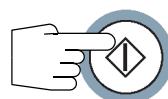
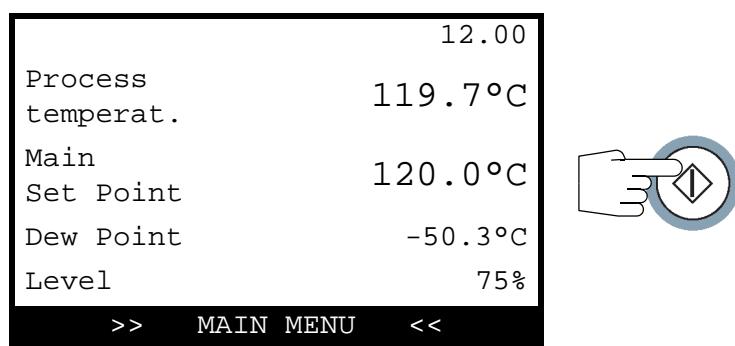
15.4.a. Start up Menu



Start up Menu

This function START UP prevents deterioration of material. The Set Point temperature is reached gradually on the basis of the parameters listed below.

Material temp.		Sets the minimum material temperature, below which the start up function is activated
Start up SP		Sets the required operating temperature during the start up function
Start up time		Sets the maximum duration of the start up function.

15.4.b. Machine stopping Menu


Machine stopping Menu

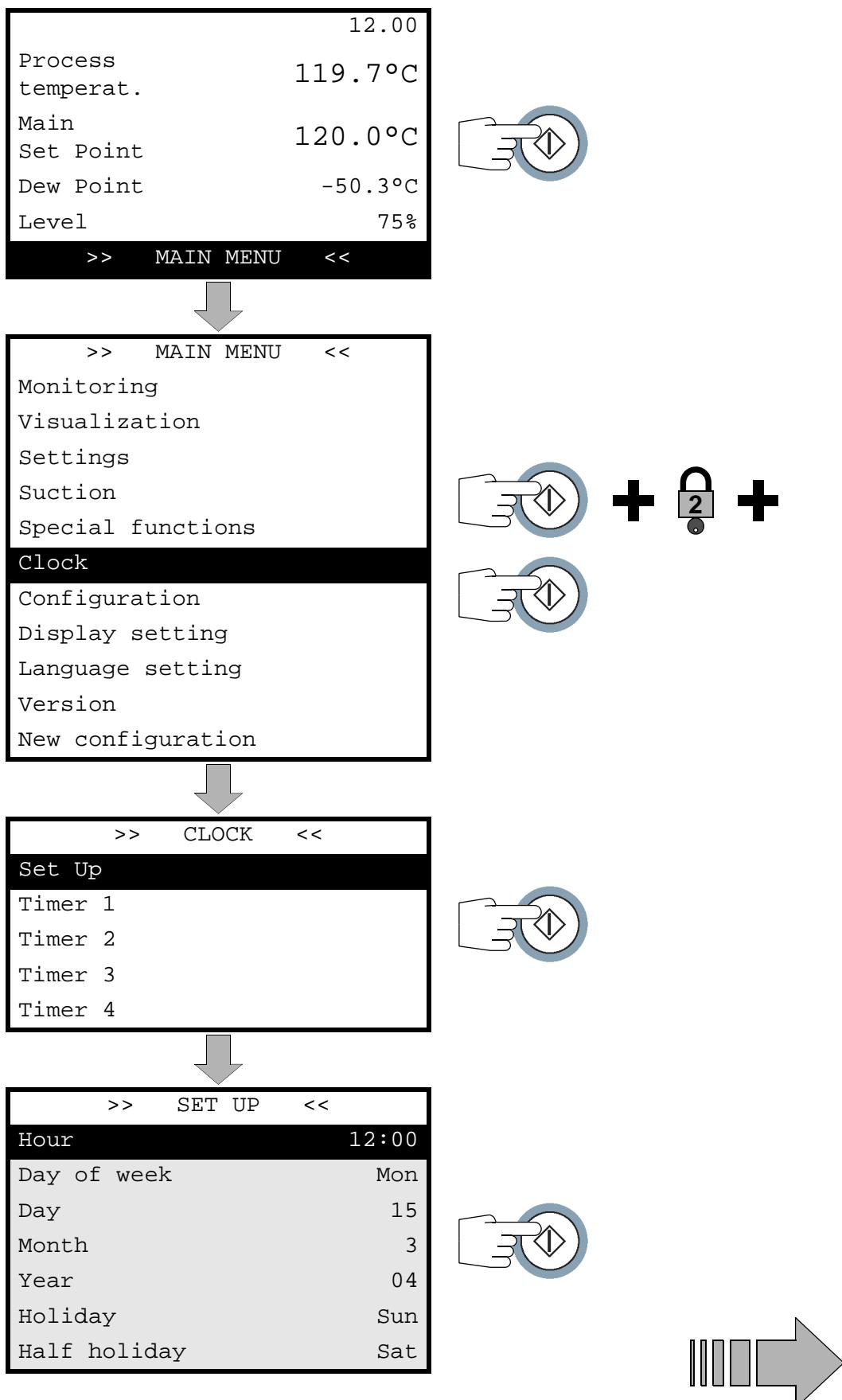
TO ENABLE THE FUNCTION CONNECT THE DRYER TO THE PROCESSING MACHINE FOLLOWING INDICATIONS IN WIRING DIAGRAM (see Set Point selection)

This function MACHINE STOPPING prevents deterioration of material due to excessive drying, in case of prolonged stop of processing machine. The Set Point temperature is reduced temporarily, on the basis of the parameters listed below.

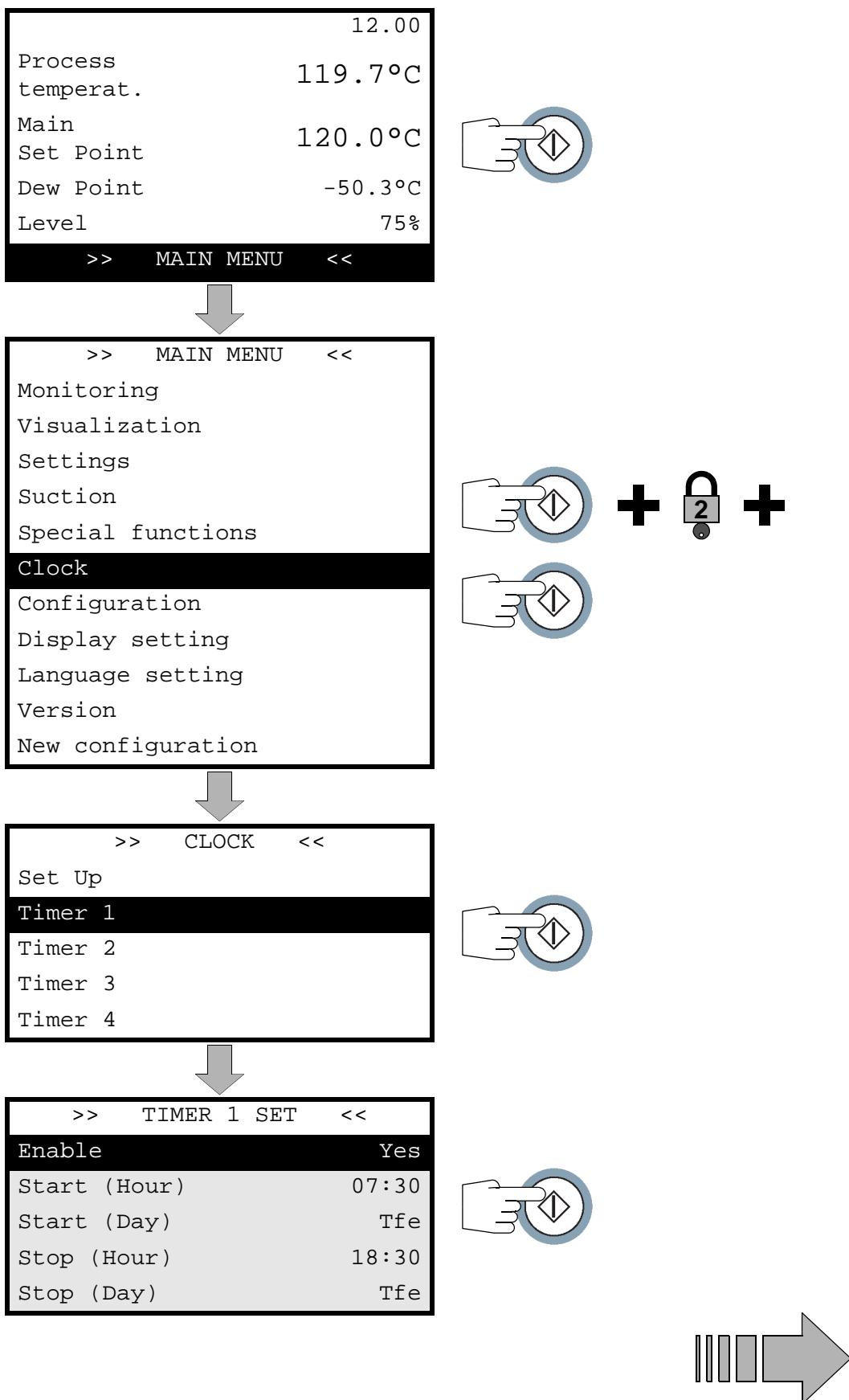
Reduced SP		Sets the required operating temperature during machine stopping function
Reduced SP delay		Sets the maximum time of processing machine stop, after which the reduced Set Point is activated and maintained through to the machine restart

15.5. Clock Menu

15.5.a. Set Up Menu



<i>Set Up Menu</i>	
Hour	Sets the current time
Day of week	Sets the current week day: • Sun =sunday ↓ • Sat =saturday
Day	Sets the date of the current month
Month	Sets the current month
Year	Sets the current year
Holiday	Sets day considered as holiday • Sun = sunday ↓ • Sat = saturday
Half holiday	Sets day considered as half holiday • Sun = sunday ↓ • Sat = saturday

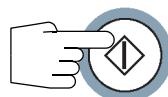
15.5.b. Timer 1 (2, 3) Menu


Timer 1 (2, 3) Menu

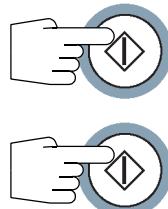
Enable	Enable timer 1 (2, 3) function
Start (Hour)	Sets machine start-up time
Start (Day)	Sets the date of machine start-up: <ul style="list-style-type: none"> • Sun = sunday ↓ • Sat = saturday • Tfe = all days except holidays • Tfp = all days except holidays and half holidays • All = all days
Stop (Hour)	Sets machine shutdown time
Stop (Day)	Sets the date of machine shutdown <ul style="list-style-type: none"> • Sun = sunday ↓ • Sat = saturday • Tfe = all days except holidays • Tfp = all days except holidays and half holidays • All = all days

15.5.c. Timer 4 Menu

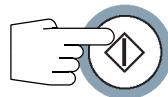
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



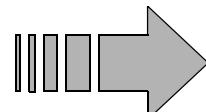
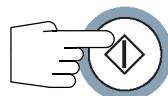
>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



>> CLOCK <<
Set Up
Timer 1
Timer 2
Timer 3
Timer 4



>> TIMER 4 SET <<	
Enable	Yes
Start (Hour)	07:30
Start (Day)	3
Start (Month)	1
Stop (Hour)	18:30
Stop (Day)	31
Stop (Month)	12

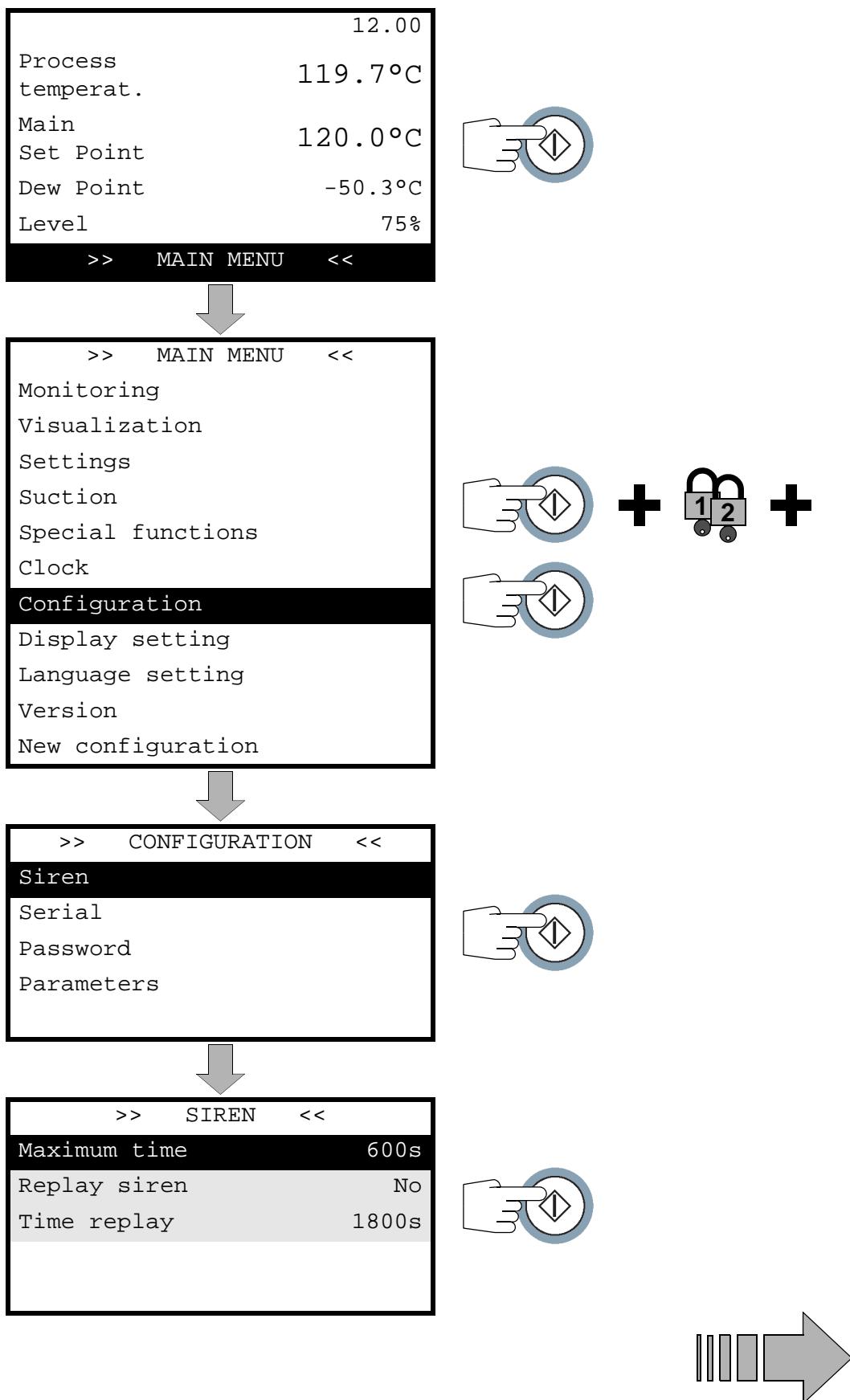


Timer 4 Menu	
Enable	Enable timer 4 function
Start (Hour)	Sets machine start-up time
Start (Day)	Sets the date of machine start-up: • 1 = first day of month ↓ • 31 = last day of month
Start (Month)	Sets the month of machine start-up • 1 = january ↓ • 12 = december
Stop (Hour)	Sets machine shutdown time
Stop (Day)	Sets the date of machine shutdown • 1 = first day of month ↓ • 31 = last day of month
Stop (Month)	Sets the month of machine shutdown • 1 = january ↓ • 12 = december



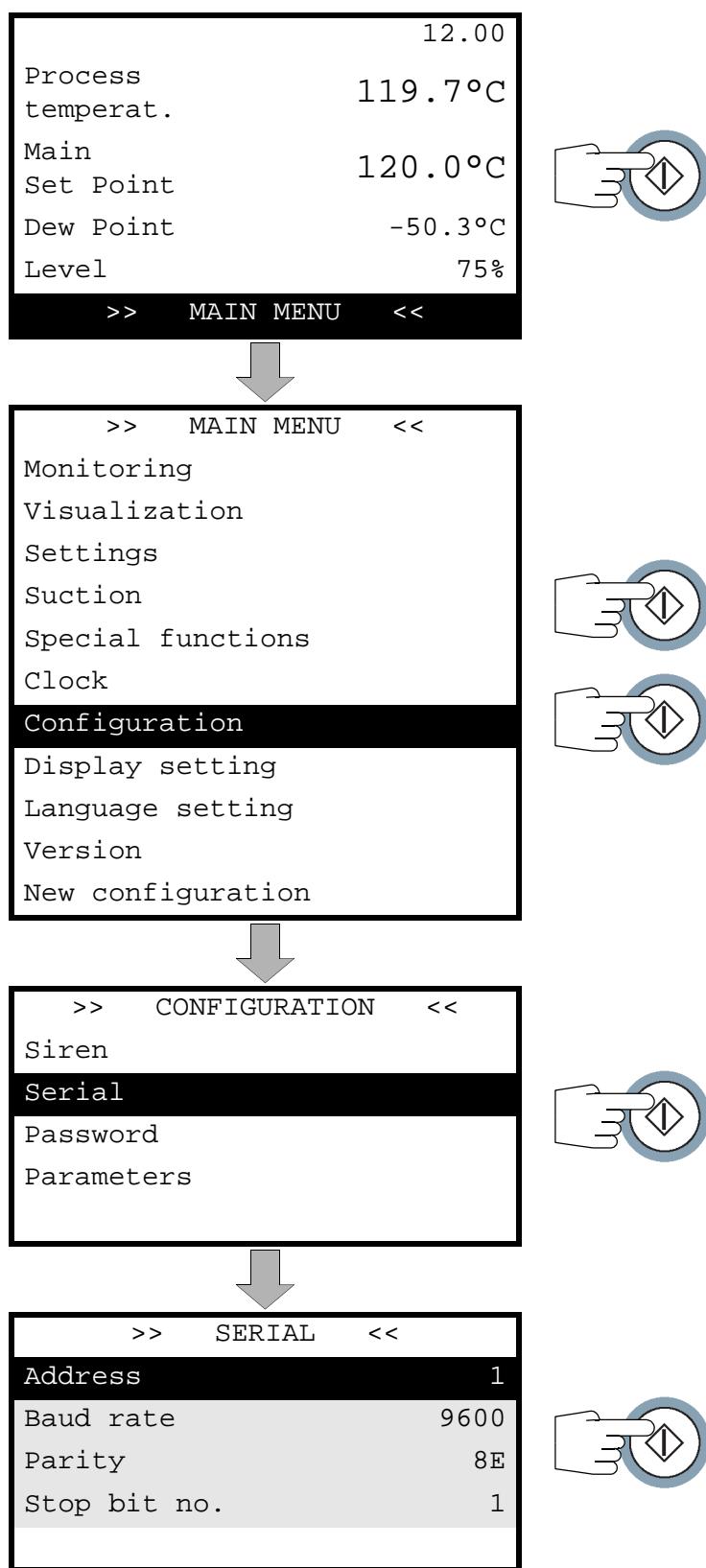
15.6. Configuration Menu

15.6.a. Siren Menu



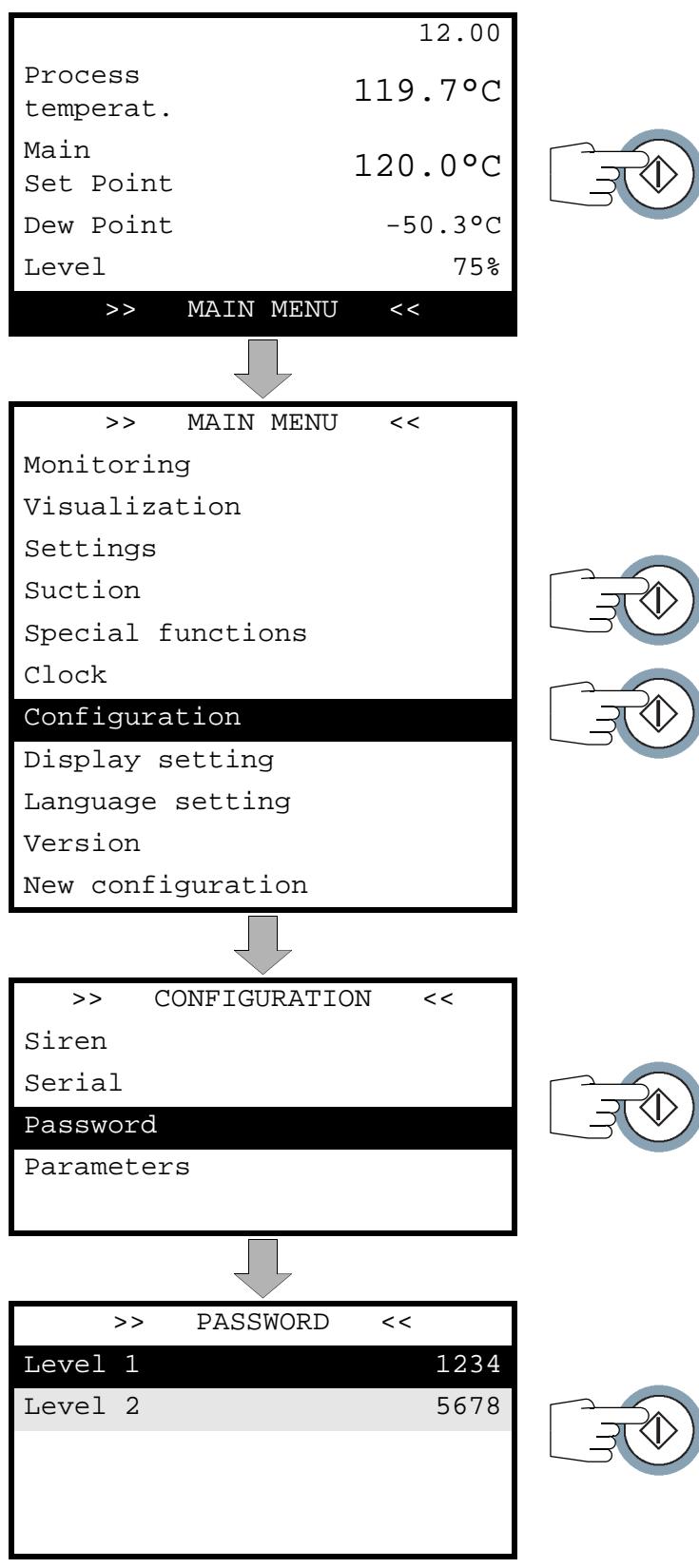
Siren Menu

Maximum time		Sets the maximum duration the interval after which the siren is shut off (when the acoustic alarm signal is not shut off manually)
Replay siren		Enable replay siren function
Time replay		Sets the duration of interval, after which, if the alarm signal persists, the siren is re-activated

15.6.b. Serial Menu


Serial Menu

Address		Sets the address of the device in the event of connection to remote control systems
Baud rate		Sets the data communication speed
Parity		Sets the type of control for correctness of transmitted data
Stop bit no.		Sets format of transmitted data

15.6.c. Password Menu


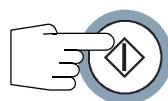


Password Menu

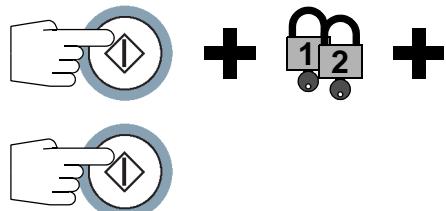
Level 1		Sets the level 1 password
Level 2		Sets the level 2 password

15.6.d. Parameters Menu

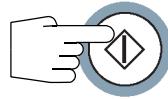
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



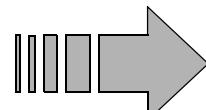
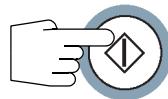
>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



>> CONFIGURATION <<
Siren
Serial
Password
Parameters



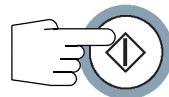
>> PARAMETERS <<	
P_60	0
P_61	1
P_62	0
P_63	0
P_64	0
PL_03	300
PL_04	300
PL_05	0
PL_06	0



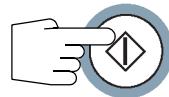
Parameters Menu	
ATTENTION!	
Changing these parameters may cause variations on dryer operation. Operate on preset values only if necessary or when replacing the electronic control board.	
P_60	Set to [0] if there is NO temperature probe positioned on regeneration blower inlet
P_61	Set to [1] (<i>default</i>) if there is a temperature probe positioned on regeneration blower inlet
P_62	Set to [0] if there is NO temperature probe positioned on the main hopper cone
P_63	Set to [1] (<i>default</i>) if there is a temperature probe positioned on the main hopper cone
P_64	Set to [0] (<i>default</i>) if there is NO temperature probe positioned on main hopper transport blower outlet
PL_03	Set to [1] if there is a temperature probe positioned on main hopper transport blower outlet
PL_04	Set to [0] (<i>default</i>) if there is NO material level sensor positioned on secondary hopper
PL_05	Set to [1] if there is a material level sensor positioned on secondary hopper
PL_06	Sets the duration (in seconds) of secondary hopper transport blower vacuum operating time after the last material loading cycle
	Sets the duration (in seconds) of main hopper transport blower vacuum operating time after the last material loading cycle
	Set to [0] (<i>default</i>) if there is NOT a secondary hopper dedicated transport blower
	Set to [1] if there is a secondary hopper dedicated transport blower
	Sets the duration (in seconds) of delay on clogged pipes signal coming from the differential pressure switch positioned on main hopper transport blower, before the relevant alarm signal

15.7. Display setting Menu

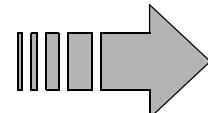
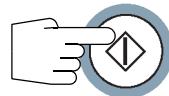
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



>> DISPLAY SETTING <<
Contrast 40%
Brightness 60%



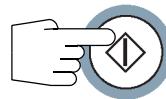


<i>Display setting Menu</i>	
Contrast	Sets display contrast
Brightness	Sets the display brightness

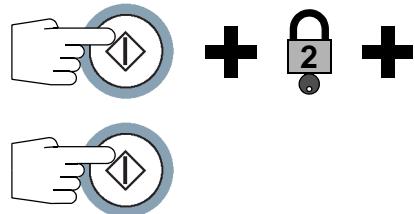


15.8. Language setting Menu

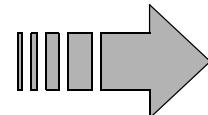
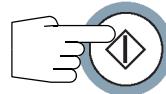
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



>> MAIN MENU <<
Monitoring
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Display setting
Language setting
Version
New configuration



>> LANGUAGE SETTING <<
Language ENG



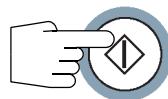
Language setting Menu

LANGUAGE SETTING menu shows different selections depending on languages available for panel display.

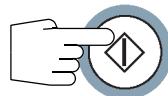
Language		Sets the language for display of panel menus: • ENG = English • ITA = Italian • DEU = German or: • ENG = English • ESP = Spanish • POR = Portuguese or: • ENG = English • FRA = French • DEU = German or: • ENG = English • ITA = Italian • PYC = Russian
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15.9. Version Menu

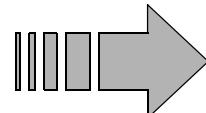
	12.00
Process temperat.	119.7 °C
Main Set Point	120.0 °C
Dew Point	-50.3 °C
Level	75%
>> MAIN MENU <<	



>> MAIN MENU <<
Monitoring
Visualization
Settings
Suction
Special functions
Clock
Configuration
Display setting
Language setting
Version
New configuration



>> VERSION <<
Type PET
Version xxx



***Version Menu***

Type	Displays machine type (PET)
Version	Displays the software version

16. Alarms list

Description and cause - remedy		
02: High deviation		
	<p>Cause:</p> <p>1. The value [High deviation] has been exceeded.</p>	<p>Remedy:</p> <p>1. Check efficiency of heating resistance and relative contactor. - Check progress of process temperature with respect to Set Point.</p>
03: Low deviation		
	<p>Cause:</p> <p>1. The value [Low deviation] has been exceeded.</p>	<p>Remedy:</p> <p>1. Check efficiency of heating resistance and relative contactor. - Check progress of process temperature with respect to Set Point.</p>
04: Err. phase seq. or Proc.blow.therm.sw		
	<p>Cause:</p> <p>1. Electric power phases not connected correctly.</p> <p>2. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines.</p> <p>3. Blower blocked mechanically.</p>	<p>Remedy:</p> <p>1. Invert the two wires on the input terminals of the machine main switch (see <i>wiring diagram</i>). This operation must be performed with the machine disconnected from the power supply!</p> <p>2. Check condition of filters, valves and pipelines.</p> <p>3. Check that blower can rotate freely.</p>

Description and cause - remedy

	05: High temperature in heating chamber	<i>Temperature overload inside heating chamber</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 2. Heating resistance always active. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check condition of filters, valves and pipelines. 2. Reduce Set Point to 0 and check that the resistance is not powered. - After identifying and solving the problem, wait for the temperature to fall (the thermostat resets automatically).
	08: High temperature air in hopper	<i>Temperature overload on drying hopper inlet</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. The value [Alarm dev.] has been exceeded. 2. Heating resistance always active. 3. Process temperature probe faulty or incorrectly positioned. 4. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check efficiency of heating resistance. 2. Reduce Set Point to 0 and check that the resistance is not powered. 3. Check probe efficiency and positioning to ensure total contact with travelling air flow. 4. Check condition of filters, valves and pipelines.
	09: Process bed inlet overheated	<i>Temperature overload on process bed inlet</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Cooling water flow rate low or absent. 2. Cooling water temperature too high. 3. Cooling battery encrusted or dirty. 4. Cooling water filter clogged. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1./2. Check that cooling water flow rate and temperature values are sufficient. 3./4. Clean filter and replace cooling battery.

Description and cause - remedy		
10: Regen. blower thermal switch		<i>Regeneration blower thermal switch tripped</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 2. Blower blocked mechanically. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check condition of filters, valves and pipelines. 2. Check that blower can rotate freely.
11: High temperature left bed chamber		<i>Temperature overload in left-hand regeneration chamber</i>
12: High temperature right bed chamber		<i>Temperature overload in right-hand regeneration chamber</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Heating resistance always active. 2. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check regeneration resistance contactor and replace if necessary. 2. Check condition of filters, valves and pipelines.
13: Regeneration air inlet overheated		<i>Temperature overload on regeneration blower inlet</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Cooling water flow rate low or absent. 2. Cooling water temperature too high. 3. Cooling battery encrusted or dirty. 4. Cooling water filter clogged. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1./2.Check that cooling water flow rate and temperature values are sufficient. 3./4.Clean filter and replace cooling battery.
15: No compressed air		<i>No power supply on compressed air line</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. No compressed air or pressure low. 2. Pressure switch faulty or incorrectly set. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Restore compressed air delivery, and check that the line pressure is as required by the machine and constant over time. 2. Check pressure switch and replace if necessary.

Description and cause - remedy

16: Filters clogged		
	Cause: <ol style="list-style-type: none"> 1. Excessive accumulation of dust and impurities on filter surfaces. 2. Pressure switch faulty or incorrectly set. 	Remedy: <ol style="list-style-type: none"> 1. Clean filters or replace. 2. Check pressure switch and replace if necessary.
18: Unsatisfying Dew Point		<i>If the relative sensor is not fitted, this alarm is disabled</i>
	Cause: <ol style="list-style-type: none"> 1. Dryer put into operation after prolonged period of disuse. 2. Plastic granule too humid. 3. Possible infiltration of water or ambient air in process circuit. 4. Dew point detection probe faulty or incorrectly set. 	Remedy: <ol style="list-style-type: none"> 1./2.Wait for the interval required to reduce the quantity of humidity in the hopper. 3. Check condition of air transfer pipelines inside and outside the dryer. 4. Check probe connection and replace if necessary.
19: Process probe broken		<i>Heating chamber outlet temperature probe faulty or incorrectly set</i>
20: Safety probe broken		
	Cause: <ol style="list-style-type: none"> 1. Process or safety temperature probe shorted or disconnected. 	Remedy: <ol style="list-style-type: none"> 1. Check probe connection and replace if necessary.
21: Left bed in probe broken		<i>Left bed inlet temperature probe faulty or incorrectly set</i>
22: Right bed in probe broken		<i>Right bed inlet temperature probe faulty or incorrectly set</i>
	Cause: <ol style="list-style-type: none"> 1. Bed inlet temperature probe shorted or disconnected. 	Remedy: <ol style="list-style-type: none"> 1. Check probe connection and replace if necessary.

Description and cause - remedy		
25: Left bed out probe broken		<i>Left bed outlet temperature probe faulty or incorrectly set</i>
26: Right bed out probe broken		<i>Right bed outlet temperature probe faulty or incorrectly set</i>
 Cause:	1. Bed outlet temperature probe shorted or disconnected.	Remedy: 1. Check probe connection and replace if necessary.
27: Proc.blow. outlet probe broken		<i>Process blower outlet temperature probe faulty or incorrectly set</i>
 Cause:	1. Process blower outlet temperature probe shorted or disconnected.	Remedy: 1. Check probe connection and replace if necessary.
28: Regen.blow. outlet probe broken		<i>Regeneration blower outlet temperature probe faulty or incorrectly set</i>
 Cause:	1. Regeneration blower outlet temperature probe shorted or disconnected.	Remedy: 1. Check probe connection and replace if necessary.
29: Auxiliary probe broken		<i>Auxiliary temperature probe faulty or setting error</i>
 Cause:	1. Auxiliary temperature probe shorted or disconnected.	Remedy: 1. Check probe connection and replace if necessary.
30: Process heating element broken		<i>Process air heating resistances faulty</i>
 Cause:	1. Process heating resistance faulty. 2. Cooling fan filters of electric board clogged.	Remedy: <ul style="list-style-type: none"> 1. Check heating resistance and replace if necessary. - Reduce Set Point to 0 and check that the resistance is not powered. 2. Clean filters or replace.

Description and cause - remedy

	31: Regen. heating element broken	<i>Regeneration air heating resistances faulty</i>
	<p>Cause:</p> <p>1. One of the regeneration air heating resistances is faulty.</p>	<p>Remedy:</p> <p>1. Check faulty regeneration resistance and replace if necessary.</p>
	34: Process bed inlet overheated	<i>Temperature overload on process bed inlet</i>
	<p>Cause:</p> <p>1. Cooling water flow rate low or absent.</p> <p>2. Cooling water temperature too high.</p> <p>3. Cooling battery encrusted or dirty.</p> <p>4. Cooling water filter clogged.</p>	<p>Remedy:</p> <p>1./2.Check that cooling water flow rate and temperature values are sufficient.</p> <p>3./4.Clean filter and replace cooling battery.</p>
	35: Regeneration air inlet overheated	<i>Temperature overload on regeneration blower inlet</i>
	<p>Cause:</p> <p>1. Cooling water flow rate low or absent.</p> <p>2. Cooling water temperature too high.</p> <p>3. Cooling battery encrusted or dirty.</p> <p>4. Cooling water filter clogged.</p>	<p>Remedy:</p> <p>1./2.Check that cooling water flow rate and temperature values are sufficient.</p> <p>3./4.Clean filter and replace cooling battery.</p>
	41: Receiver on hopper load missing	<i>Material loading failure on receiver installed on main hopper</i>
	<p>Cause:</p> <p>1. Dryer main hopper loading not performed.</p>	<p>Remedy:</p> <p>1. Check efficiency of transport blower.</p> <ul style="list-style-type: none"> - Clean blower and receiver filters. - Check condition of material transfer pipelines and pick-up point. - Check efficiency of hopper level sensor and calibration.

Description and cause - remedy		
47: Receiver split loading missing		<i>Material loading failure on receiver installed on secondary hopper</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Dryer split hopper loading not performed. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check efficiency of transport blower. - Clean blower and receiver filters. - Check condition of material transfer pipelines and pick-up point.
50: Suction blower thermal switch		<i>Main hopper transport blower thermal switch tripped</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 2. Blower blocked mechanically. 3. Transport blower temperature probe faulty or incorrectly positioned. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check condition of filters, valves and pipelines. 2. Check that blower can rotate freely. 3. Check probe efficiency and positioning to ensure total contact with travelling air flow.
51: Split suct. blower thermal switch		<i>Secondary hopper transport blower thermal switch tripped</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Obstructions to air flow due to clogged filters, blocked valves or clogged pipelines. 2. Blower blocked mechanically. 3. Transport blower temperature probe faulty or incorrectly positioned. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check condition of filters, valves and pipelines. 2. Check that blower can rotate freely. 3. Check probe efficiency and positioning to ensure total contact with travelling air flow.
52: Hopper blower filter clogged		
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Excessive accumulation of dust and impurities on filter surfaces. 2. Pressure switch faulty or incorrectly set. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Clean filters or replace. 2. Check pressure switch and replace if necessary.

Description and cause - remedy

53: Split blower filter clogged		
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Excessive accumulation of dust and impurities on filter surfaces. 2. Pressure switch faulty or incorrectly set. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Clean filters or replace. 2. Check pressure switch and replace if necessary.
65: Process filter door open		
	<p>Cause:</p> <ol style="list-style-type: none"> 1. At least one of the filter access doors is open. 2. Faulty microswitches. 3. Incorrect electrical connections. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Shut the filter access doors. 2. Check that the microswitches work properly and replace them if necessary. 3. Check the connections following the wiring diagram.
78: No material in hopper		<i>Failed material loading by the vacuum receiver installed on the hopper</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Loading system not active or not efficient. 2. Level sensor faulty or setting error. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Restore the loading system. 2. Check the sensor works properly and replace it if necessary.
85: Hopper disch. probe damaged		<i>Main hopper transport blower outlet temperature probe faulty or setting error</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Main hopper transport blower outlet temperature probe shorted or disconnected. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check probe connection and replace if necessary.
86: Split disch. probe damaged		<i>Secondary hopper transport blower outlet temperature probe faulty or setting error</i>
	<p>Cause:</p> <ol style="list-style-type: none"> 1. Secondary hopper transport blower outlet temperature probe shorted or disconnected. 	<p>Remedy:</p> <ol style="list-style-type: none"> 1. Check probe connection and replace if necessary.



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FLOW CHARTS

DP640 - DP644

Table 1 / 1



OPEN circuit

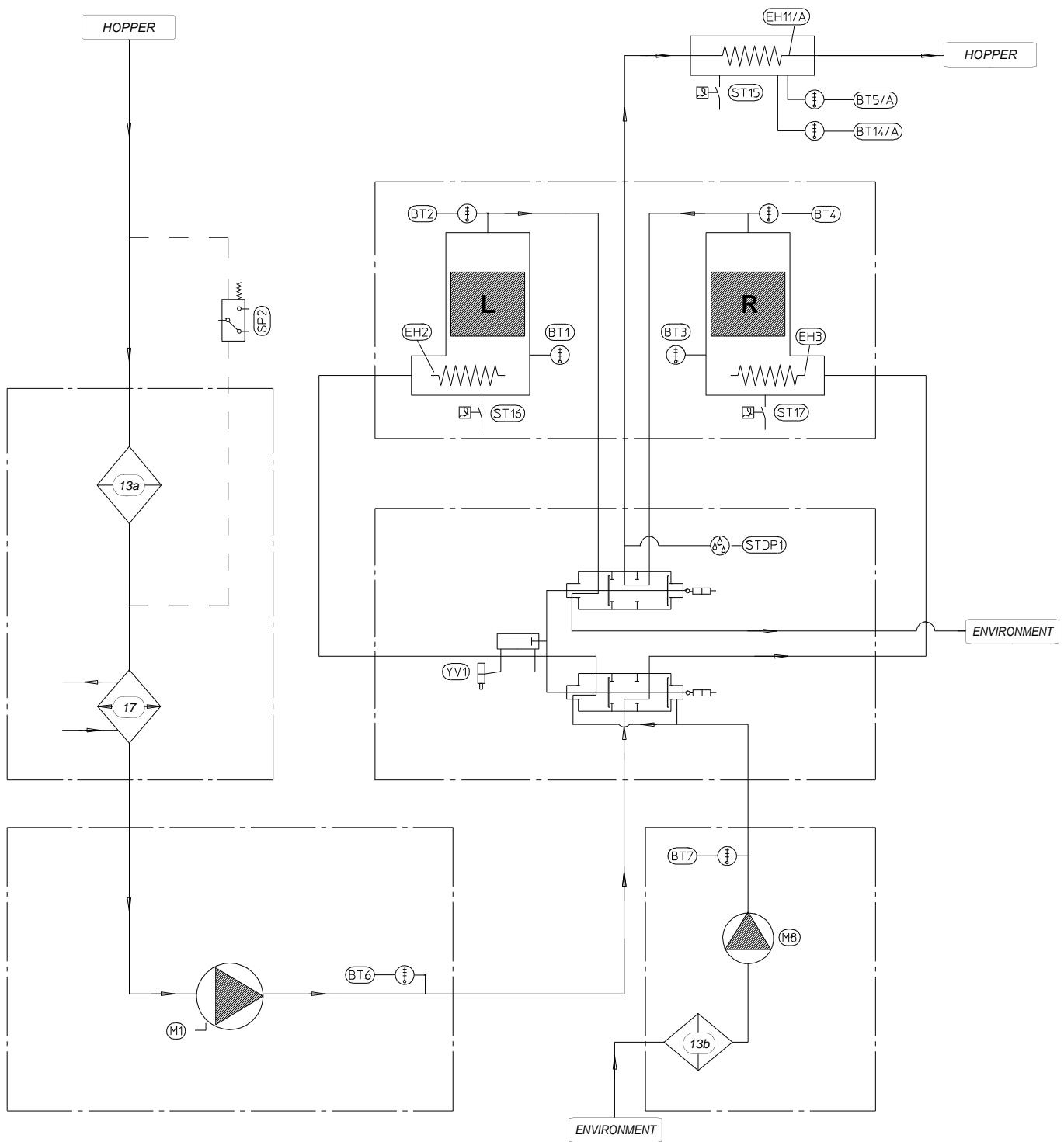
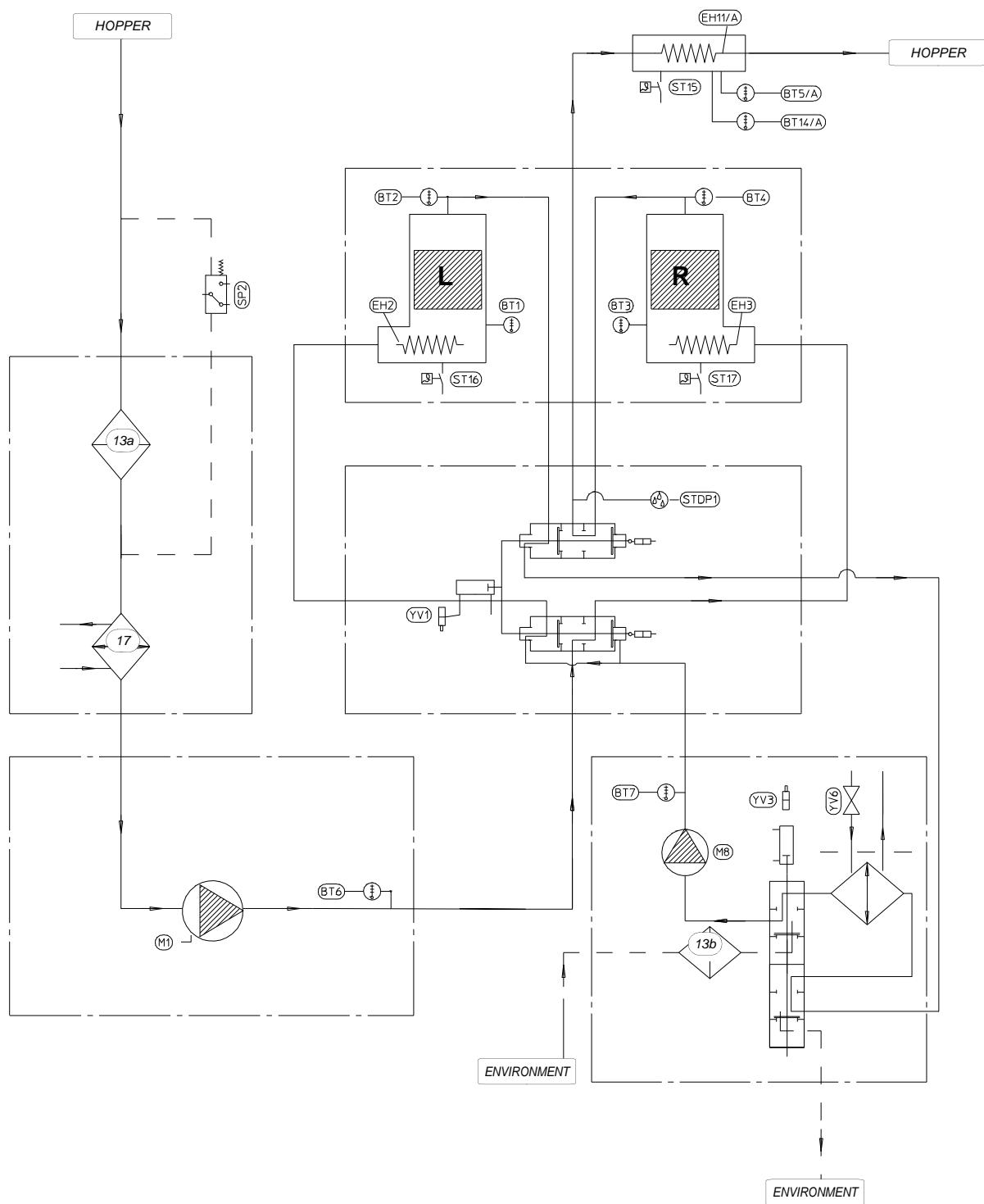


Table 2 / 1



CLOSED circuit





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TABLES OF SPARE PARTS

DP640 - DP644

Table 3 / 1

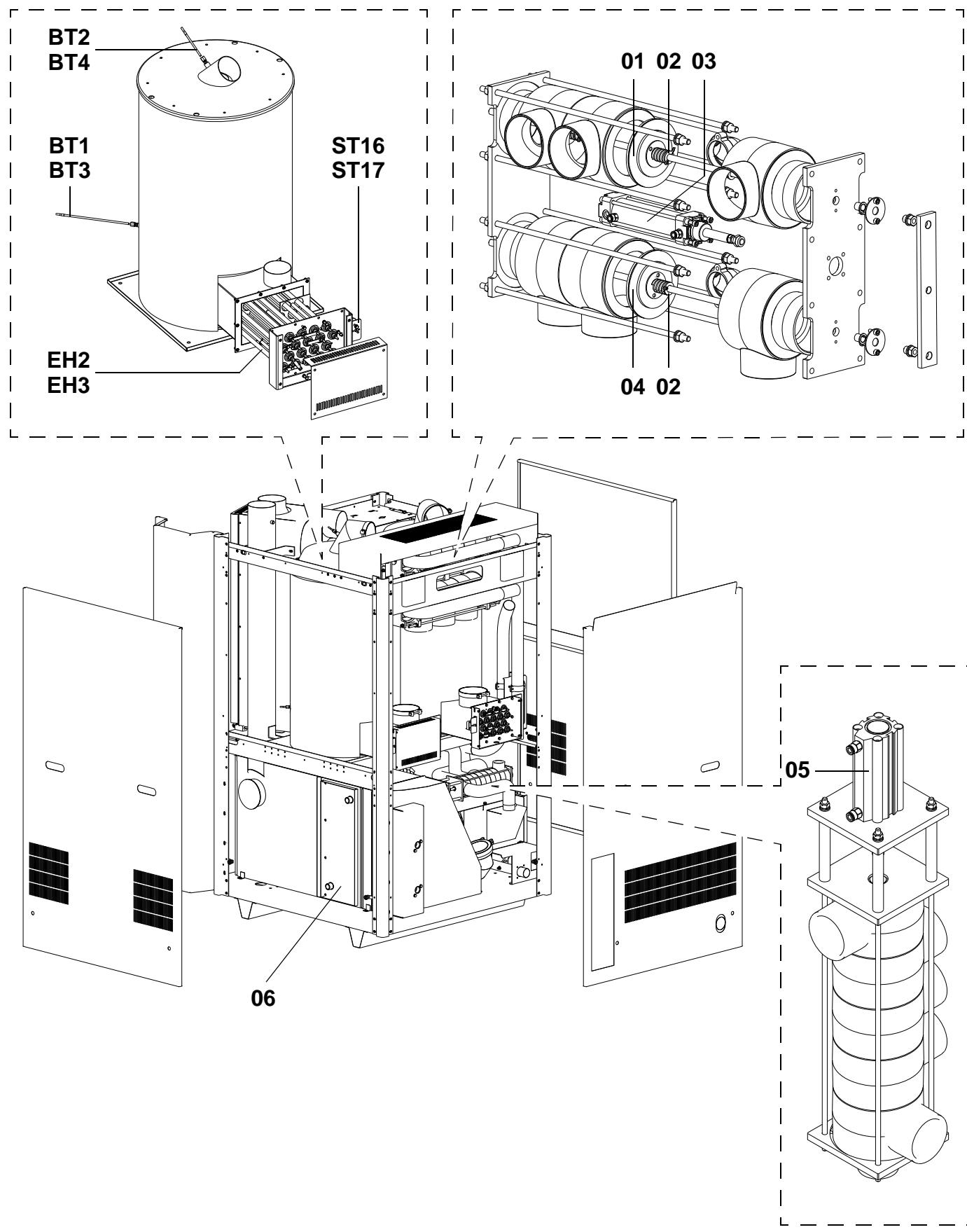


Table 3 / 2

#	Description	DP640	DP644
01	Rubber disc	640D1330	
02	Spring 26x32mm Pin 12.5x25mm CIMA	426X002	
03	Process box operating pneumatic cylinder 60N2L40A125V CAMOZZI	4141579	
04	Rubber disc	640D0710	
05	Closed circuit distribution box pneumatic cylinder QP2A032A080 CAMOZZI	4141549	
06	Heat exchanger	610A0750	
BT1*	Tower inlet air temperature probe (with connector)		
BT3*	TR PT1000 6x250 1/8" 350°C TERMICS	96ZD2040	
BT2*	Tower outlet air temperature probe (with connector)		
BT4*	TR PT1000 6x100 1/8" 400°C TERMICS	96ZD2044	
EH2*	Regeneration air heating element	380 ÷ 400V	6500101
EH3*		460V	6500361
ST16*	Regeneration chamber thermostat TU 50-400°C CAEM		
ST17*			4151699A3

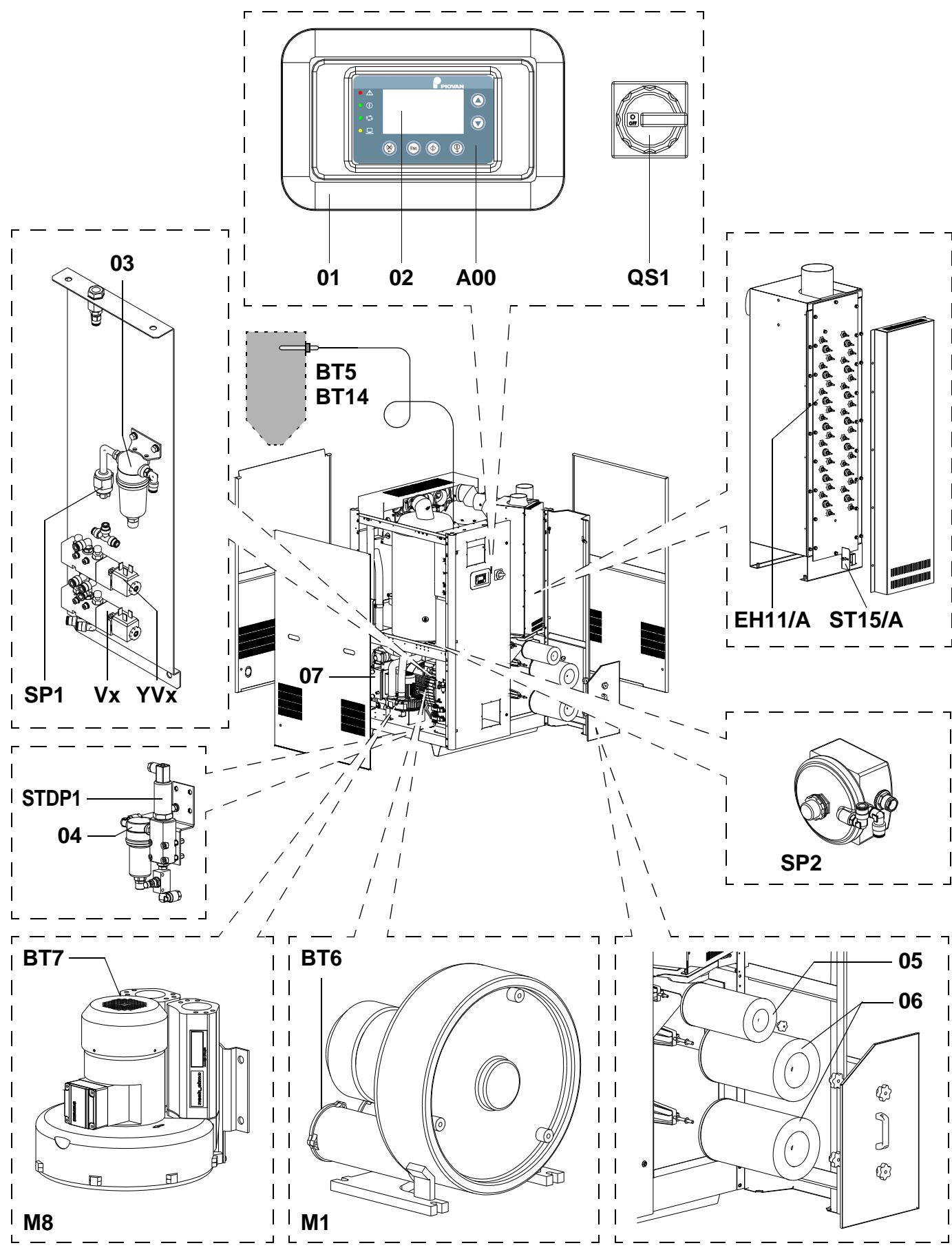
Table 4 / 1

Table 4 / 2

#	Description	DP640	DP644
01	Polycarbonate front panel	605D1710	
02	Adhesive plate for controls	648D0050	
03	Compressed air inlet filter <i>N108-F10 1/8" CAMOZZI</i>	4140916	
04	Dew Point probe air filter <i>N108-F10 1/8" Metal Cup CAMOZZI</i>	4140912	
05*	Regeneration air filter <i>8μ / 150°C P151357300 VIRGIS</i>	6151220	
06*	Process air filter <i>8μ / 150°C P151608600 VIRGIS</i>	6151230	
07	Scambiatore aria/acqua	610A3050	
A00*	Programmed card display (Available languages: English, Italian, German)	968D00601	
	Programmed card display (Available languages: English, French, German)	968D00702	
	Programmed card display (Available languages: English, Spanish, Portuguese)	968D00703	
	Programmed card display (Available languages: English, Italian, Russian)	968D00707	
BT5*	Hopper inlet air temperature probe	96ZD2043	
BT14*	<i>TR 2x PT1000 6x100 1/8" 250°C TERMICS</i>		
BT6	Blowers outlet air temperature probe (with connector)	96ZD2042	
BT7	<i>TR PT1000 6x100 1/8" 400°C TERMICS</i>		
EH11/A*	Process air heating resistance	380 ÷ 400V	6500820
		460V	6500950
M1	Process blower <i>2BH1900-7AH17 12.5 / 14.5 kW NASH-ELMO</i>	4181887	
	Process blower <i>2BH1930-7AH27-Z 15 / 17.5kW NASH-ELMO</i>		4181891
M8	Regeneration blower <i>2BH1533-7AH26 Z 1.6kW50Hz/2.1kW60Hz</i>	4182033	
QS1	Main switch <i>3KA71 23-3AA00 (250A) SIEMENS</i>	96ZD2056	
SP1	Compressed air inlet differential pressure switch <i>4111222 1/4" EUROSITCH</i>	415X015	
SP2	Filter clogging differential pressure switch <i>1823-80A DWYER</i>	413X033	
STDP1	Dew Point measurement probe <i>EAS-TX-80 24Vdc 4-20mA EASYDEW</i>	415X020	
ST15/A*	Process heating chamber thermostat <i>TU 50-400°C CAEM</i>	4151699A4	
Vx	Valve <i>358-015-02 CAMOZZI</i>	4140631	
YVx	Coil <i>G77 24Vdc CAMOZZI</i>	4550190	

Table 5 / 1

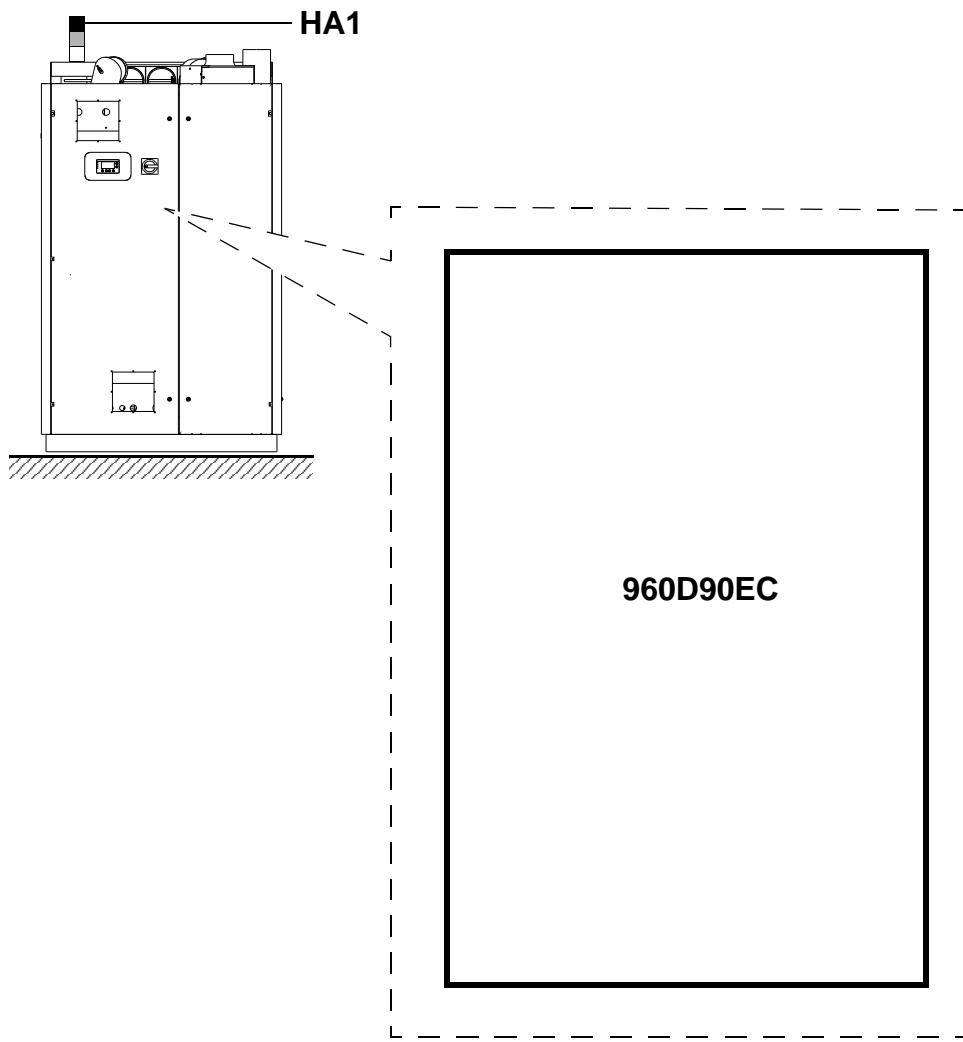


Table 5/2

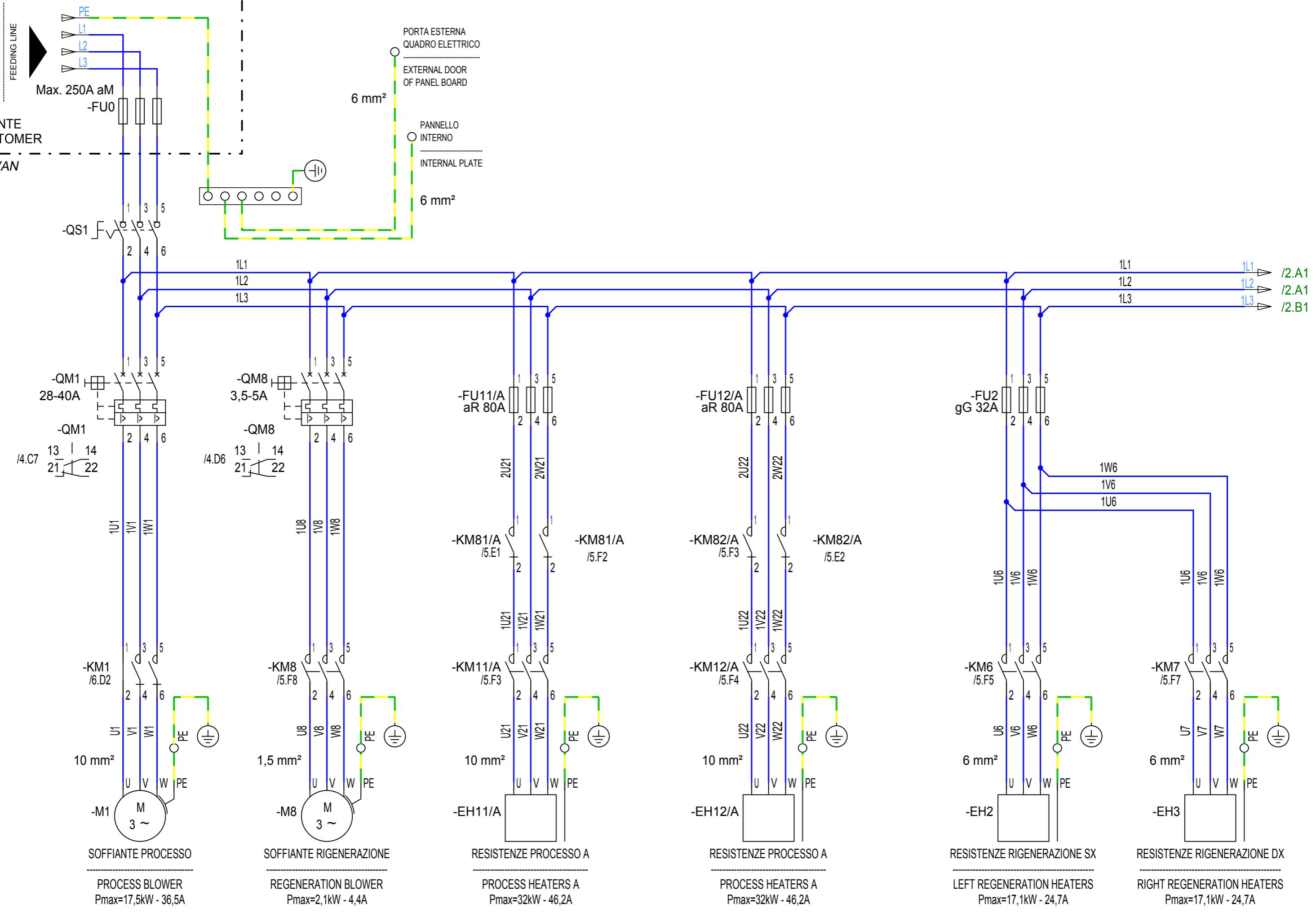
#	Description	DP640	DP644
A1	main control card Piovani	963S071	
A0	HMI Piovani	963S072	
QS1	main switch body ABB	96ZD2056	
	main switch body ABB		
	main switch body ABB		
FU2	safety cutout 5SJ63327CC20 3P 32A 400VAC SIEMENS	451S6247	
FU3	safety cutout 5SJ63027CC20 3P 2A 400VAC SIEMENS	451S6238	
FU11/A	MCCB 3VT8110-1AA03-0AA0 100A SIEMENS	451S6249	
FU12/A	MCCB 3VT8110-1AA03-0AA0 101A SIEMENS	451S6249	
KA0	phase sequence relay EWS 84 892 299 CROUZET	451S6903	
KA1	relay MY2NJ AC220/240 OMRON	451S6902	
KM1	soft starter 3RW3036-1AB14 SIEMENS	4512377	
KM6	AC contactor 400V 38A 220VAC controller NO terminal 3TF3500-0XM0 SIEMENS	451S6105	
KM7	AC contactor 400V 38A 220VAC controller NO terminal 3TF3500-0XM0 SIEMENS	451S6105	
KM8	AC contactor 400V 38A 220VAC controller NO terminal 3TF3000-0XM0 SIEMENS	451S6101	
FU4	safety cutout 5SJ61047CC20 1P 4A 400VAC simens	451S6226	
FU5	safety cutout 5SJ61027CC20 1P 2A 400VAC SIEMENS	451S6224	
EV1	cooling fun	451S7616	
GS1	DC Power	PC0333	
QM1	motor safety cutout 28 -40 A NO+NC 3VU1640-1MQ00 SIEMENS	451S6215	
QM8	motor safety cutout 3.2-5.0A NO+NC 3VU1340-1NJ00 SIEMENS	451S6206	
TC1	Transformer JBK5-630VA 400V-230V LEIPOLD	451S7404	

Project: 960SD002E

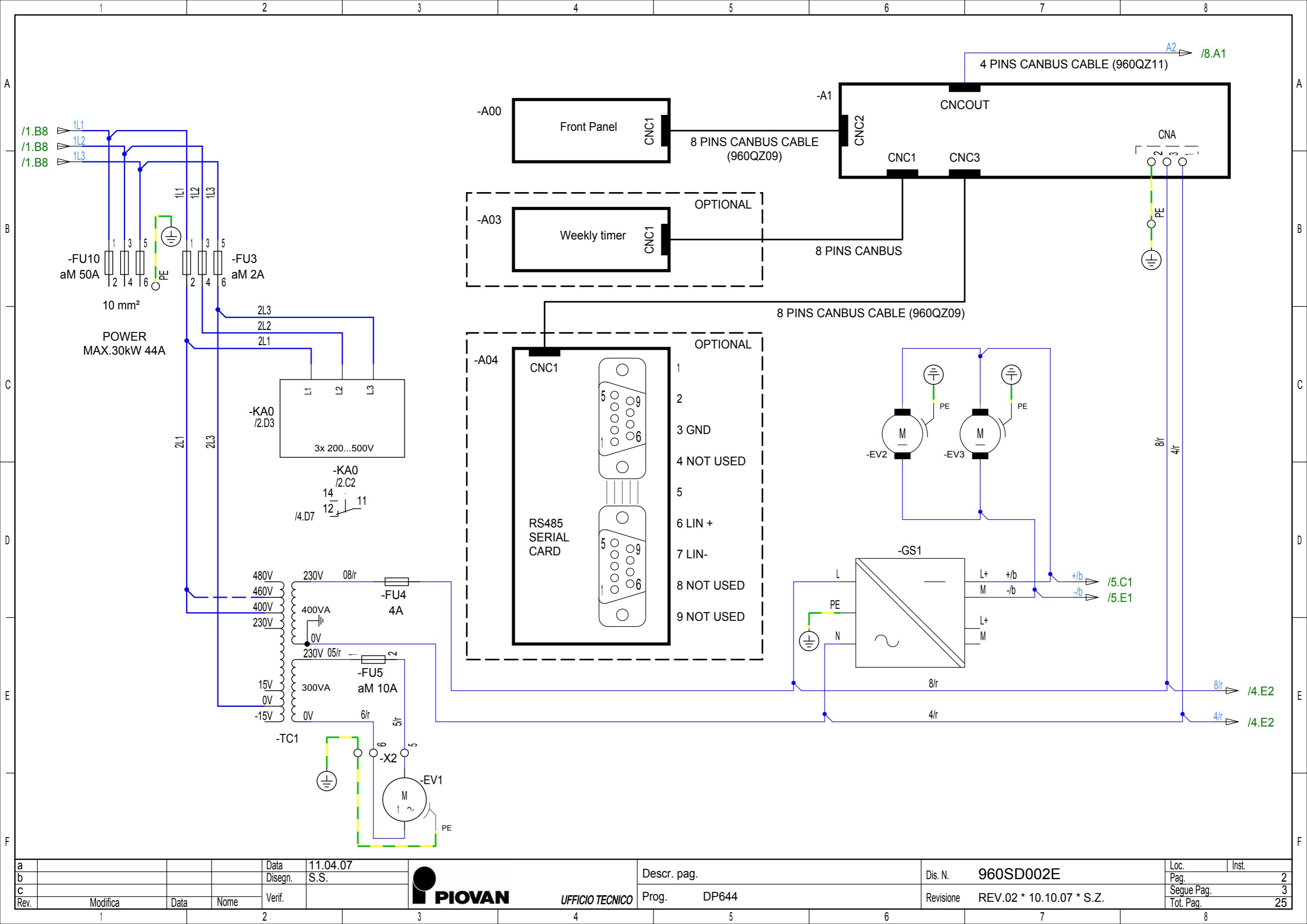
Alimentazione : Supply:	400V/50Hz ; 380V/60Hz ; 460V/60Hz / 3ph
Circuiti ausiliari : Auxiliary circuit :	230VAC ; 24VDC
Potenza installata : Installed power :	Max. 132kW
Corrente massima assorbita : Maximum load current :	Max. 204A
Corrente di spunto : Peak current :	Max. 496A
Protezione consigliata : Recommended protection :	Max. 250A aM
Max. sezione cavo alimentazione : Maximum section supply cable :	Flex cable : 120mm ² Rigid cable : / Bus bar : 20x5

Order:

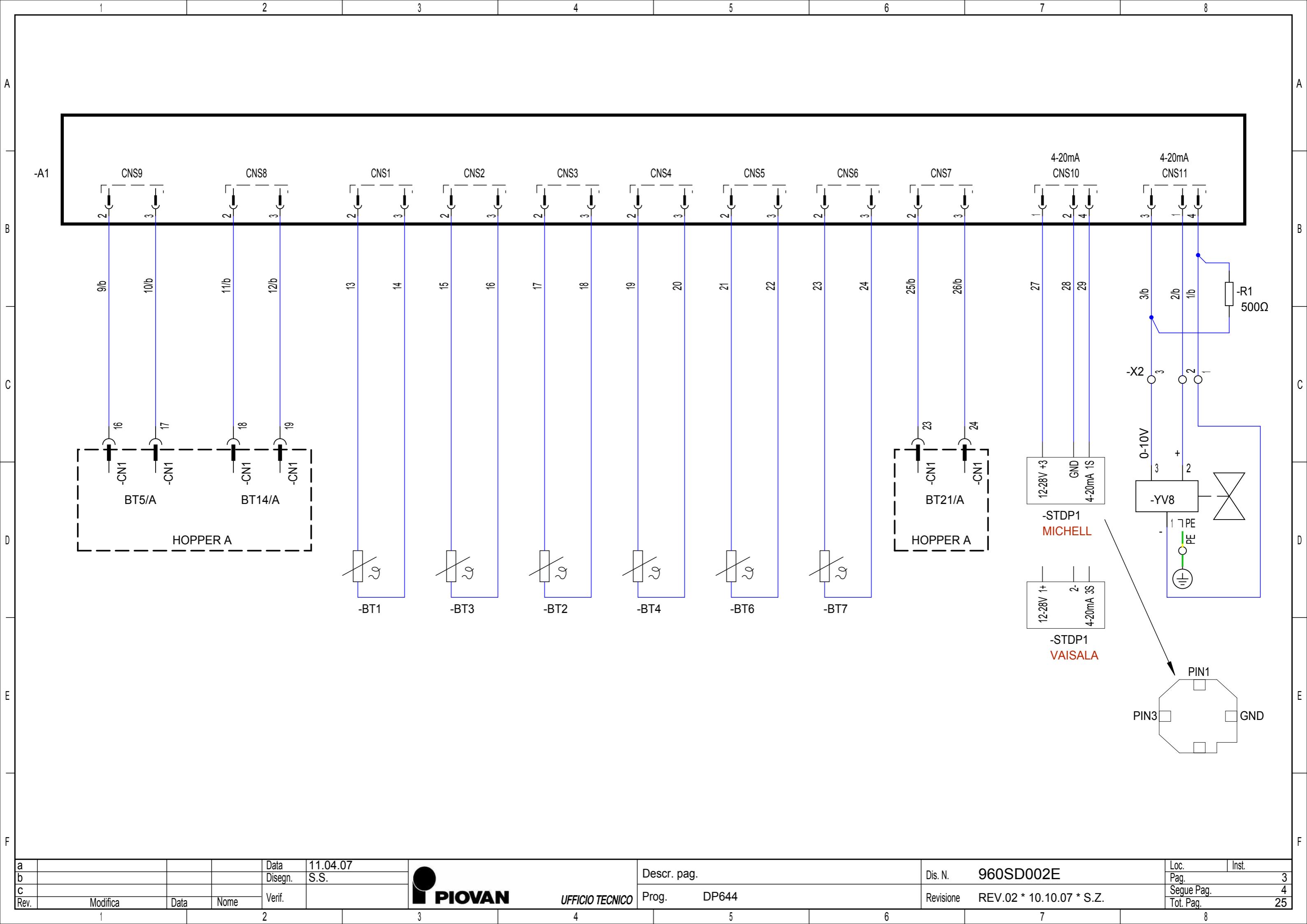
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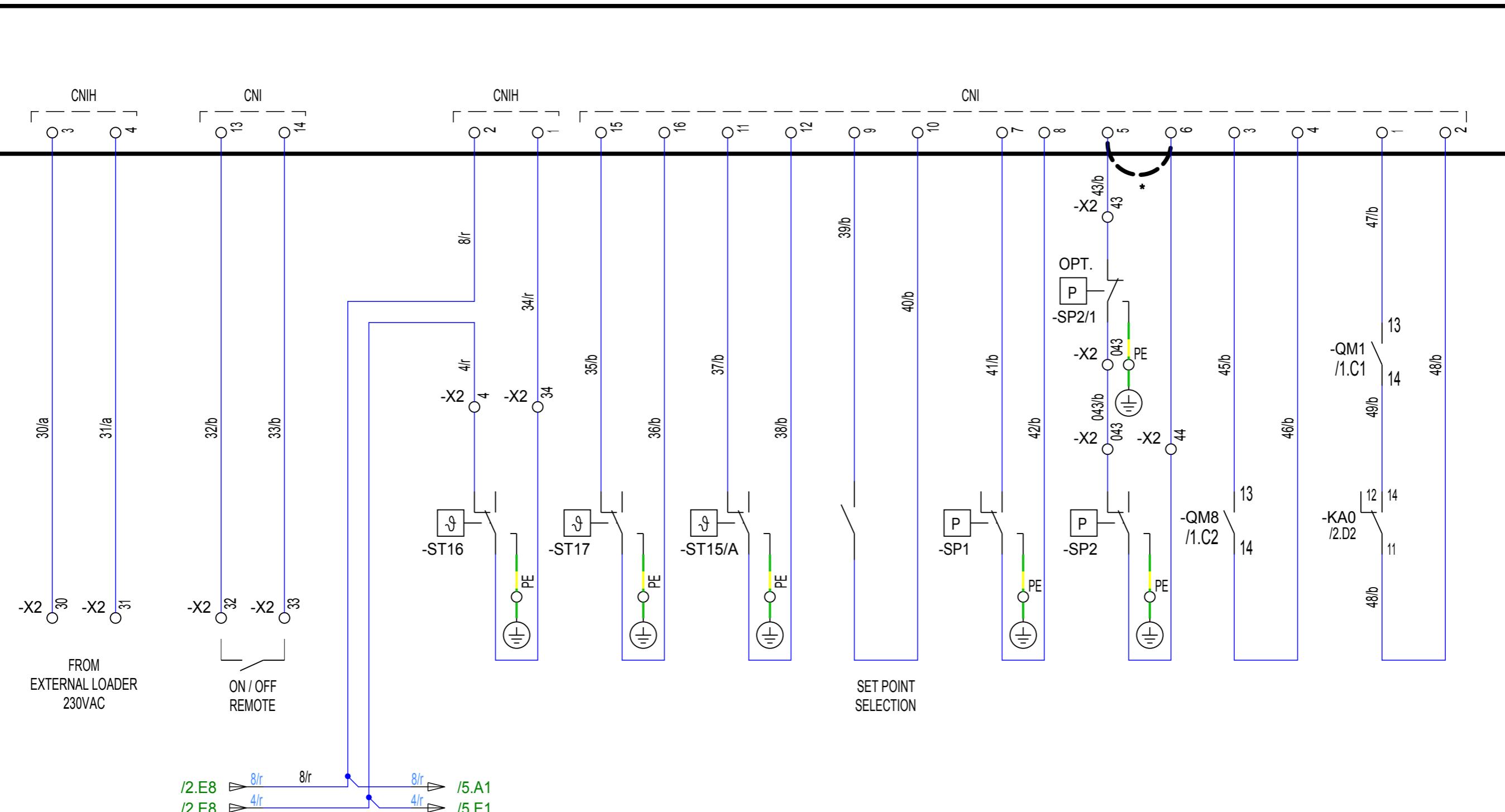


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c							Prog.	Revisione	REV.02 * 10.10.07 * S.Z.	Segue Pag.	2
Rev.	Modifica	Data	Nome	Verif.			DP644			Tot. Pag.	25



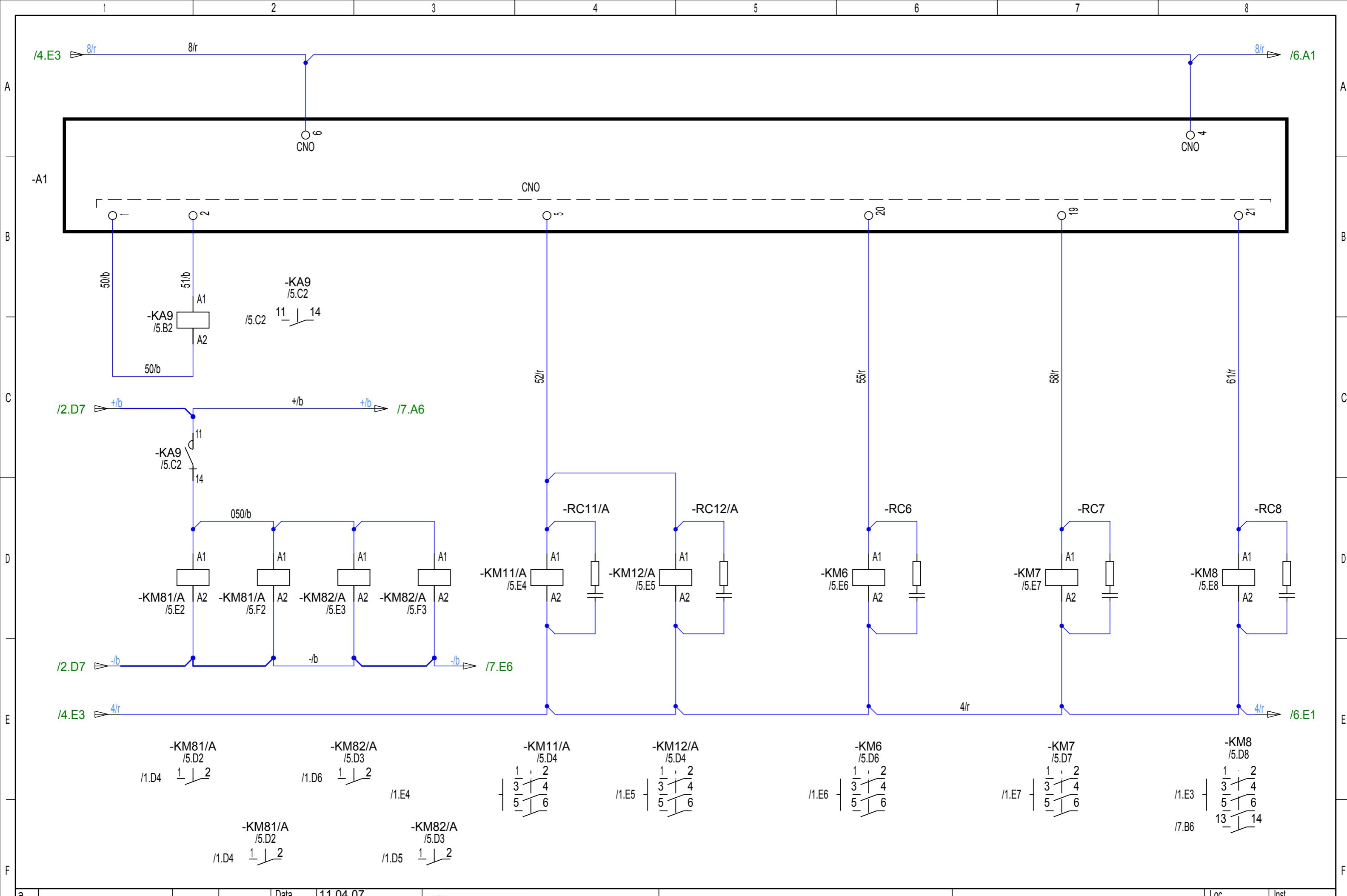
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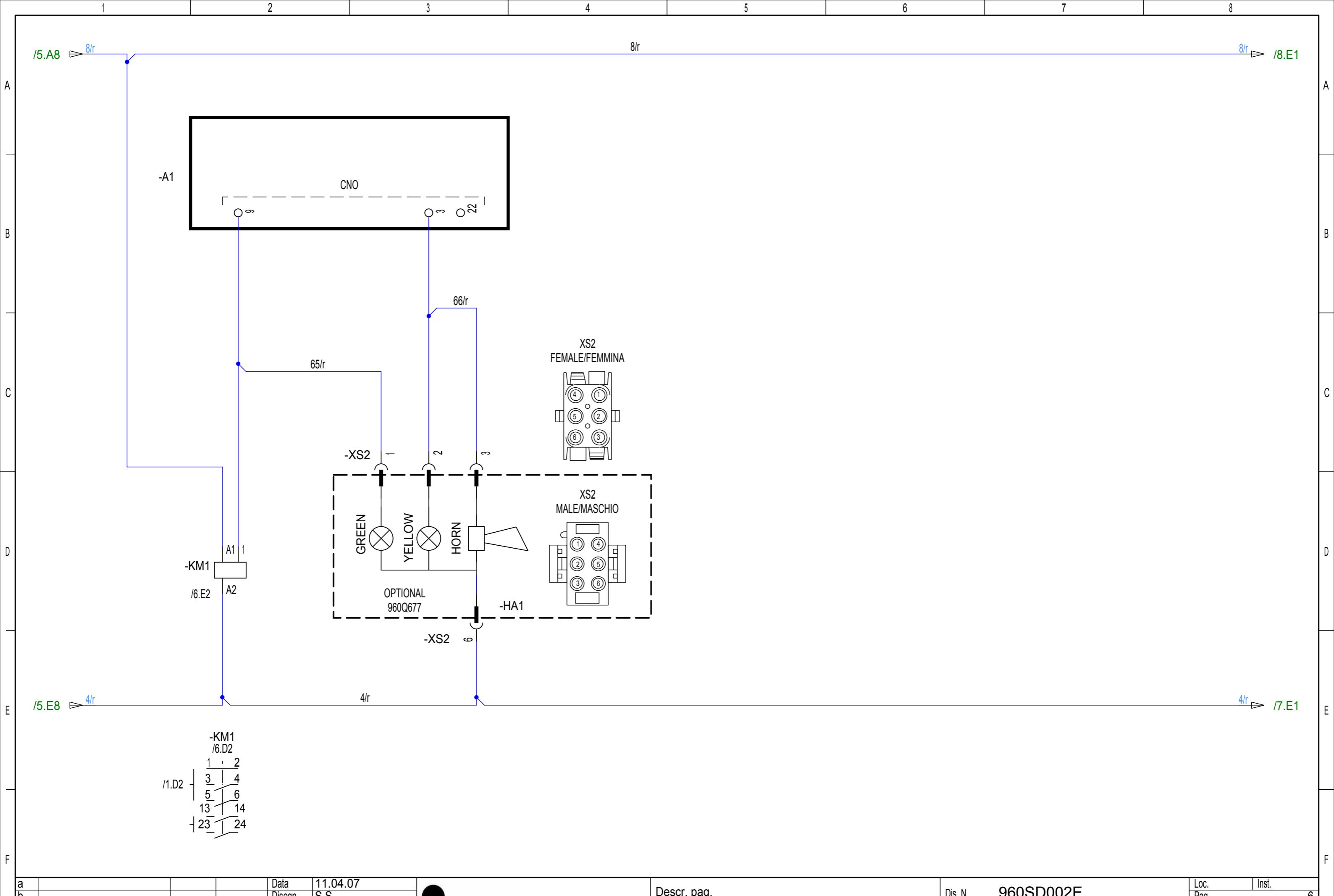


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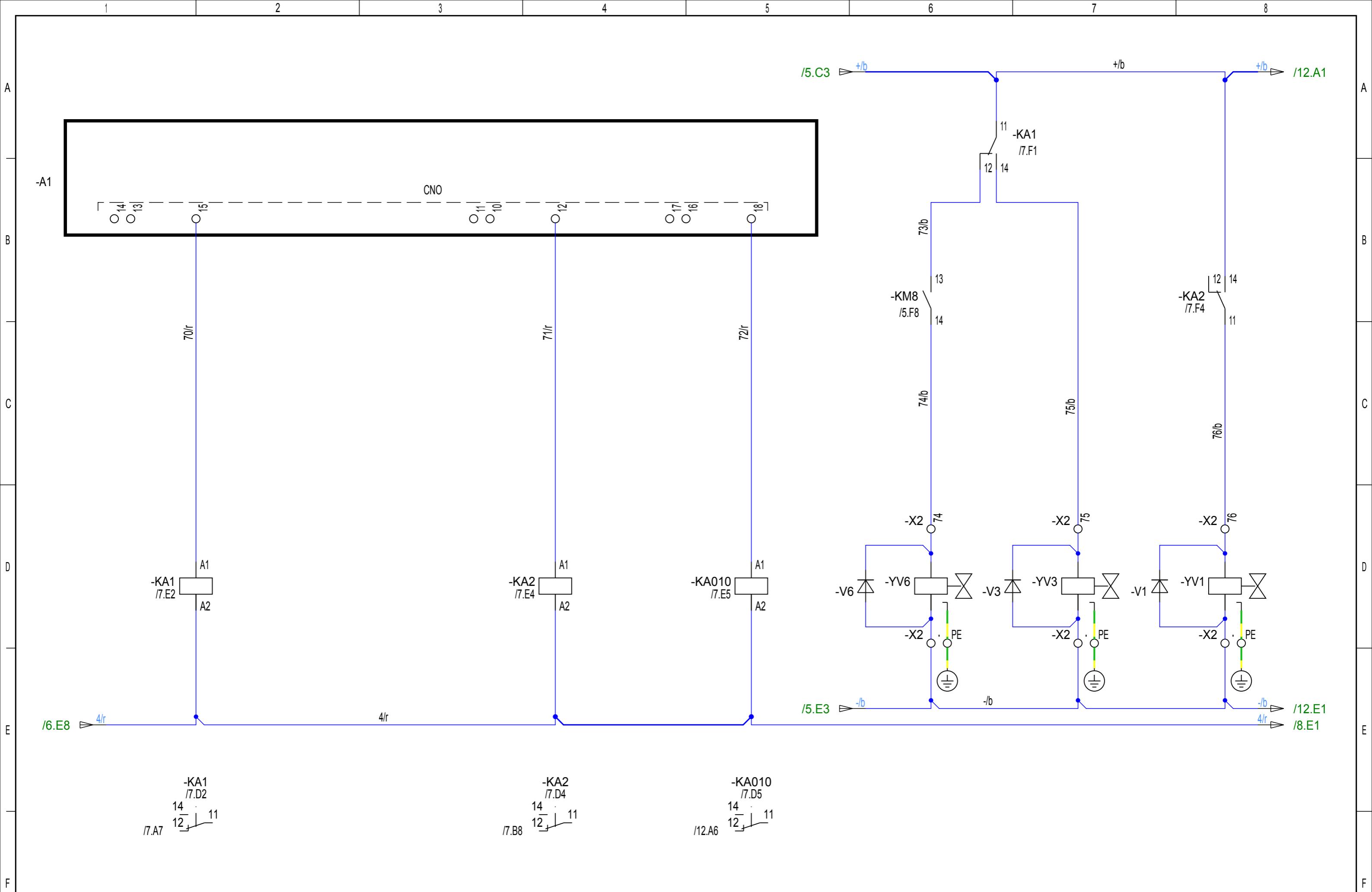
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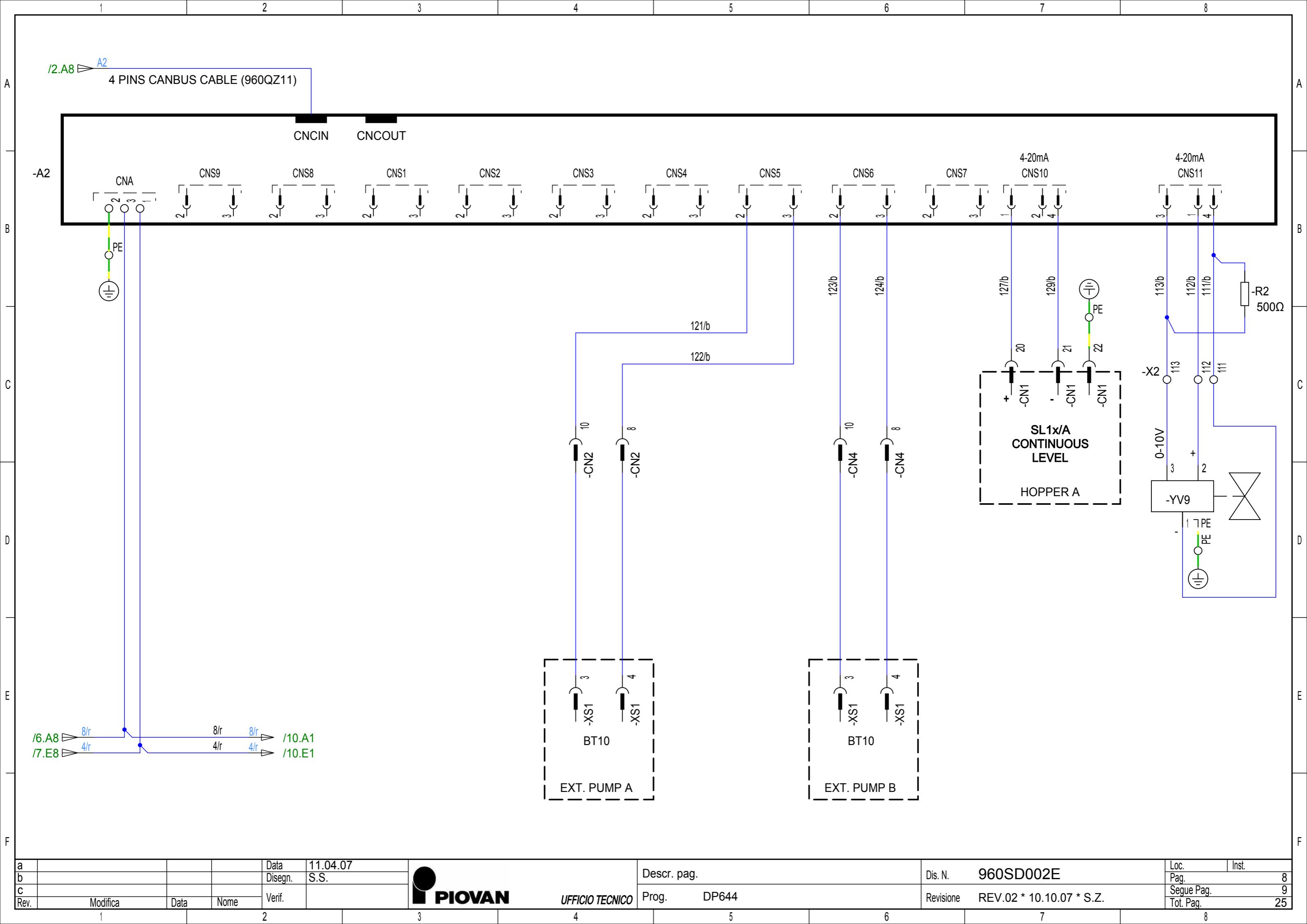
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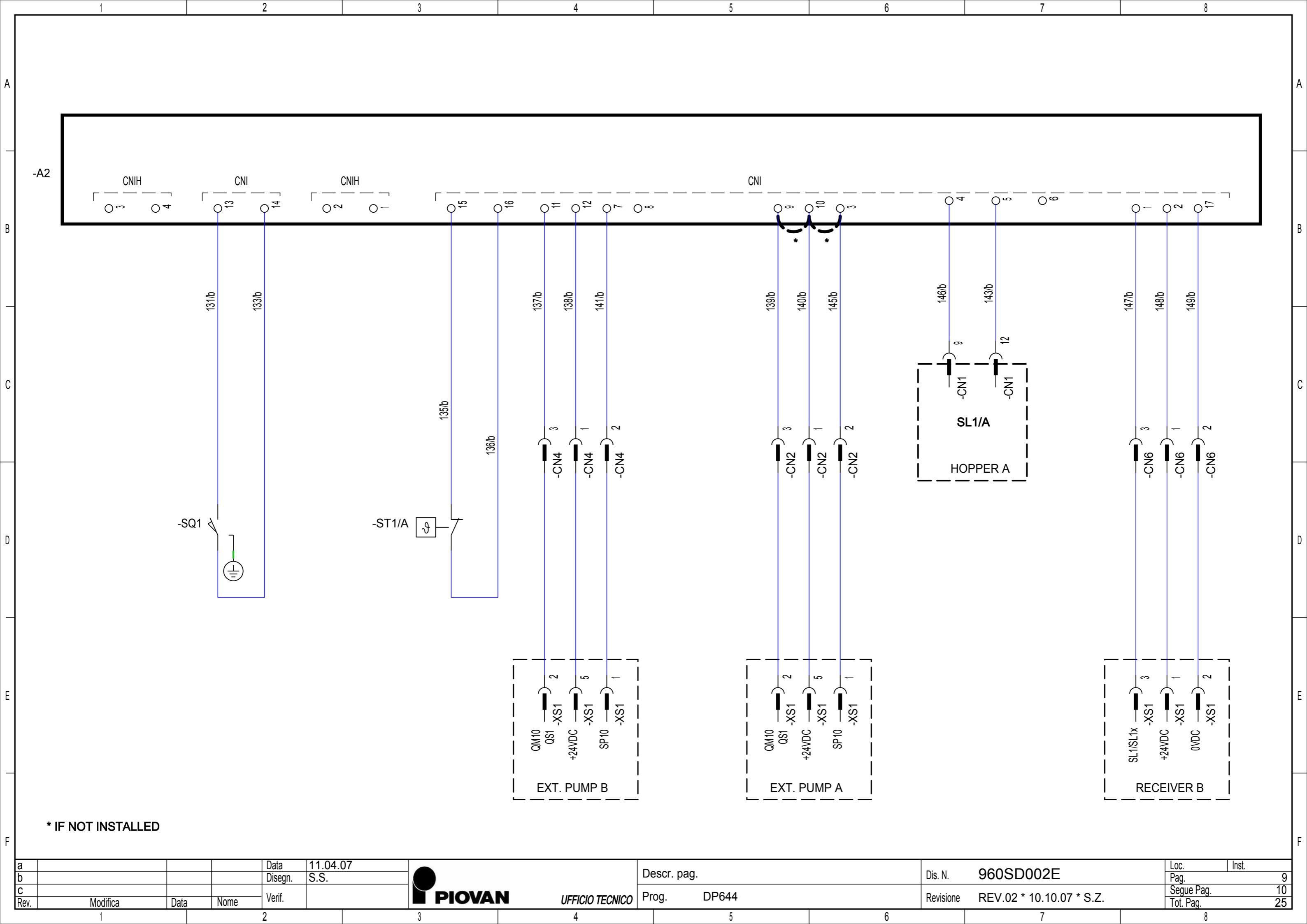


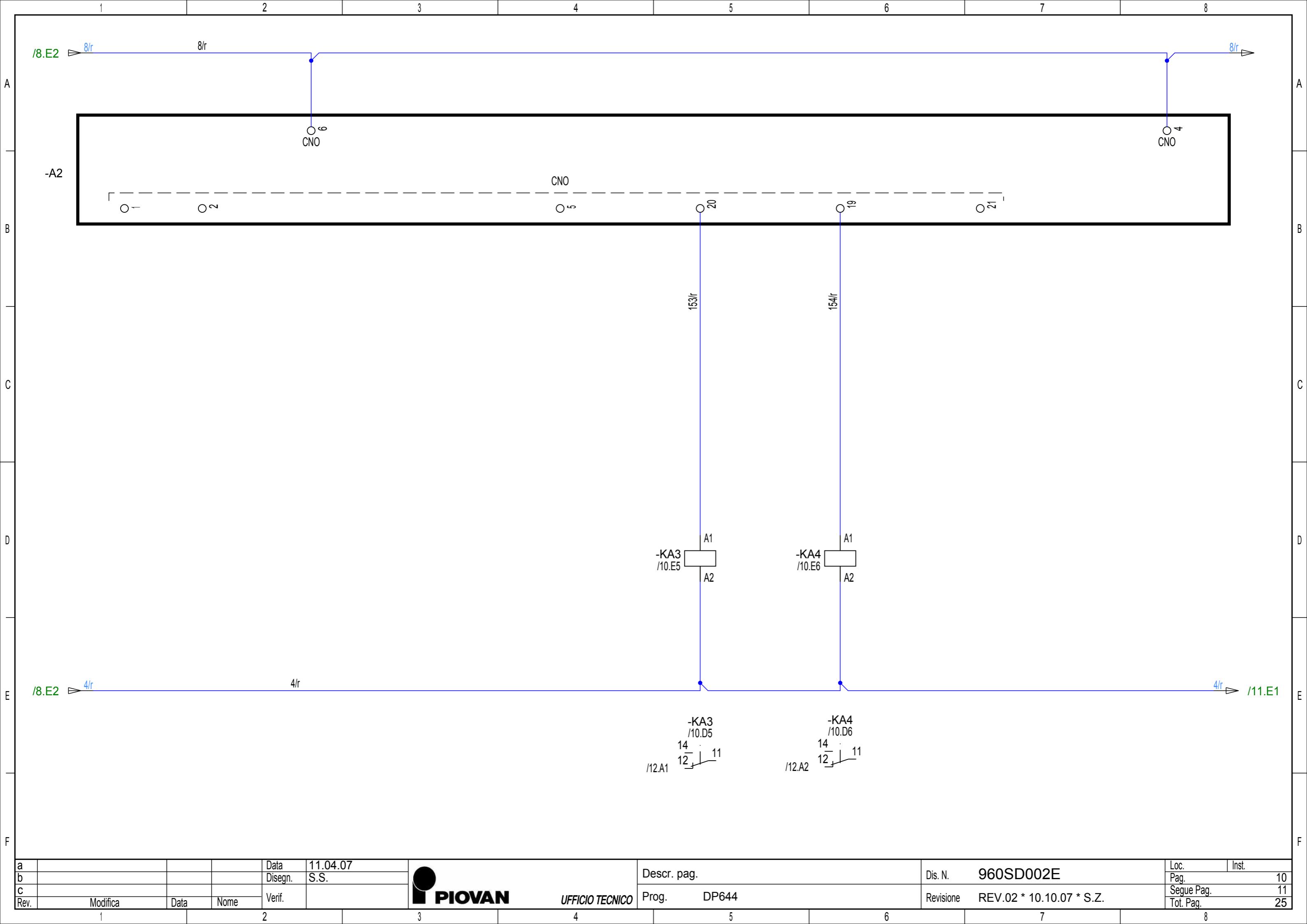
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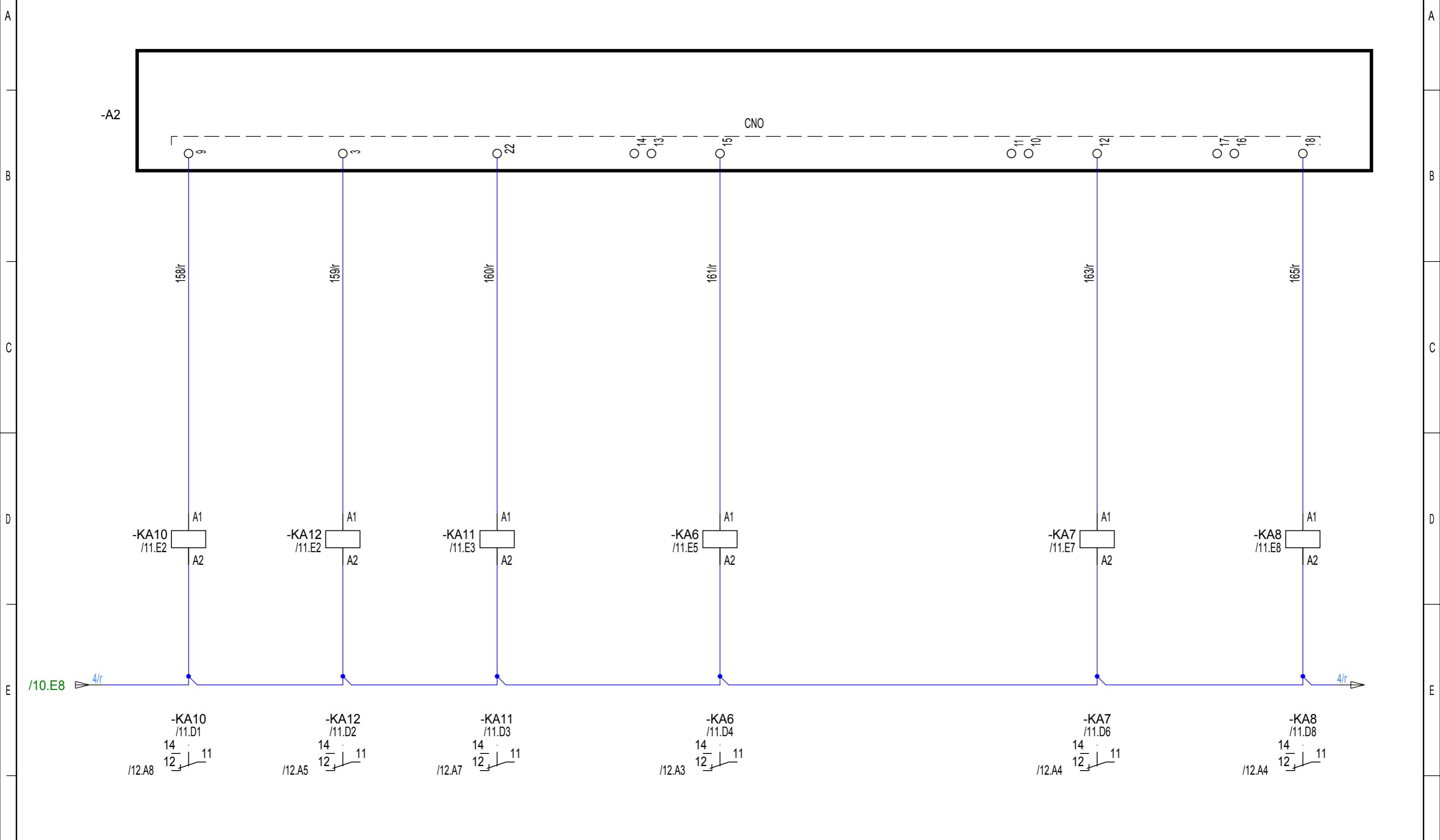
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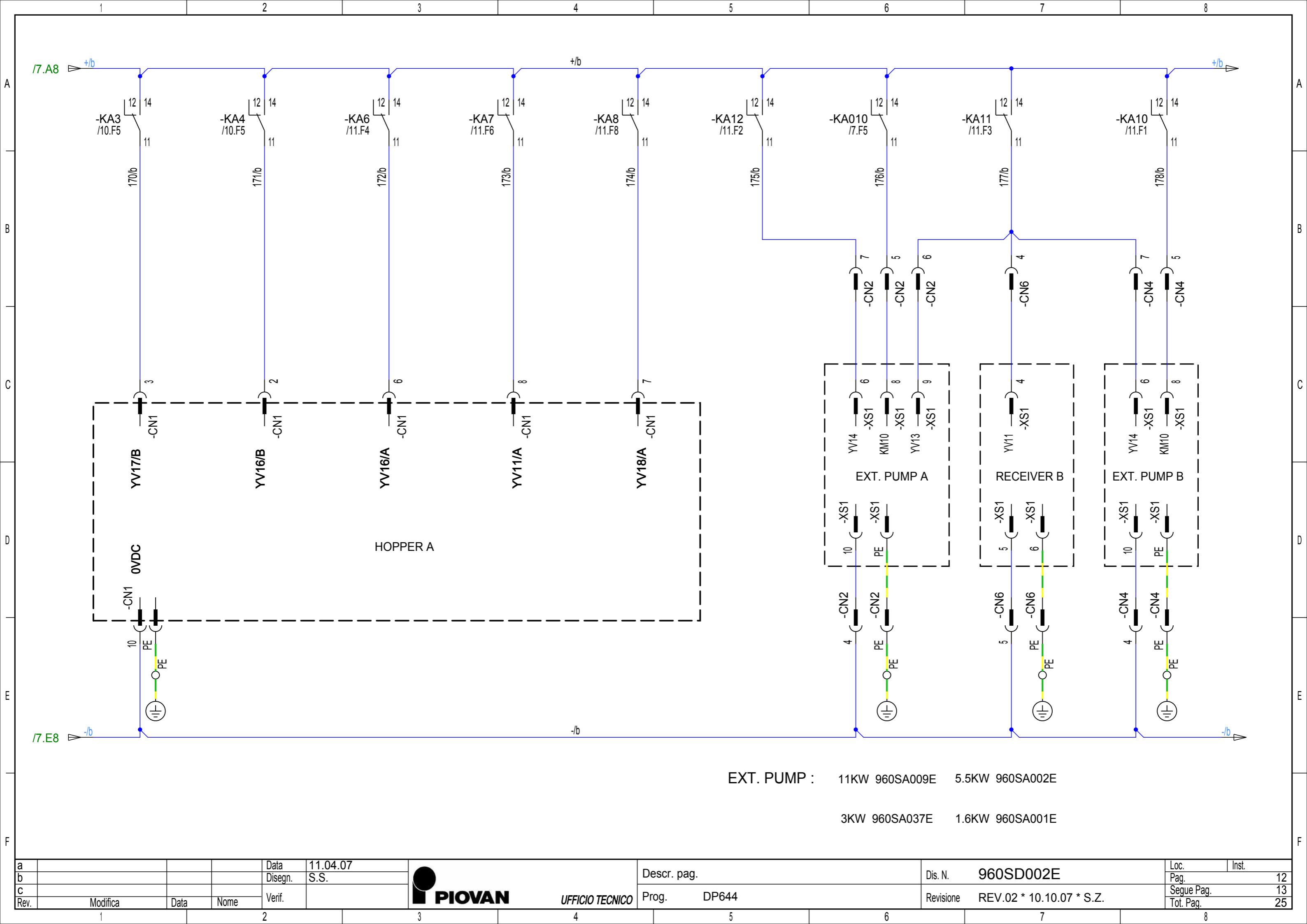


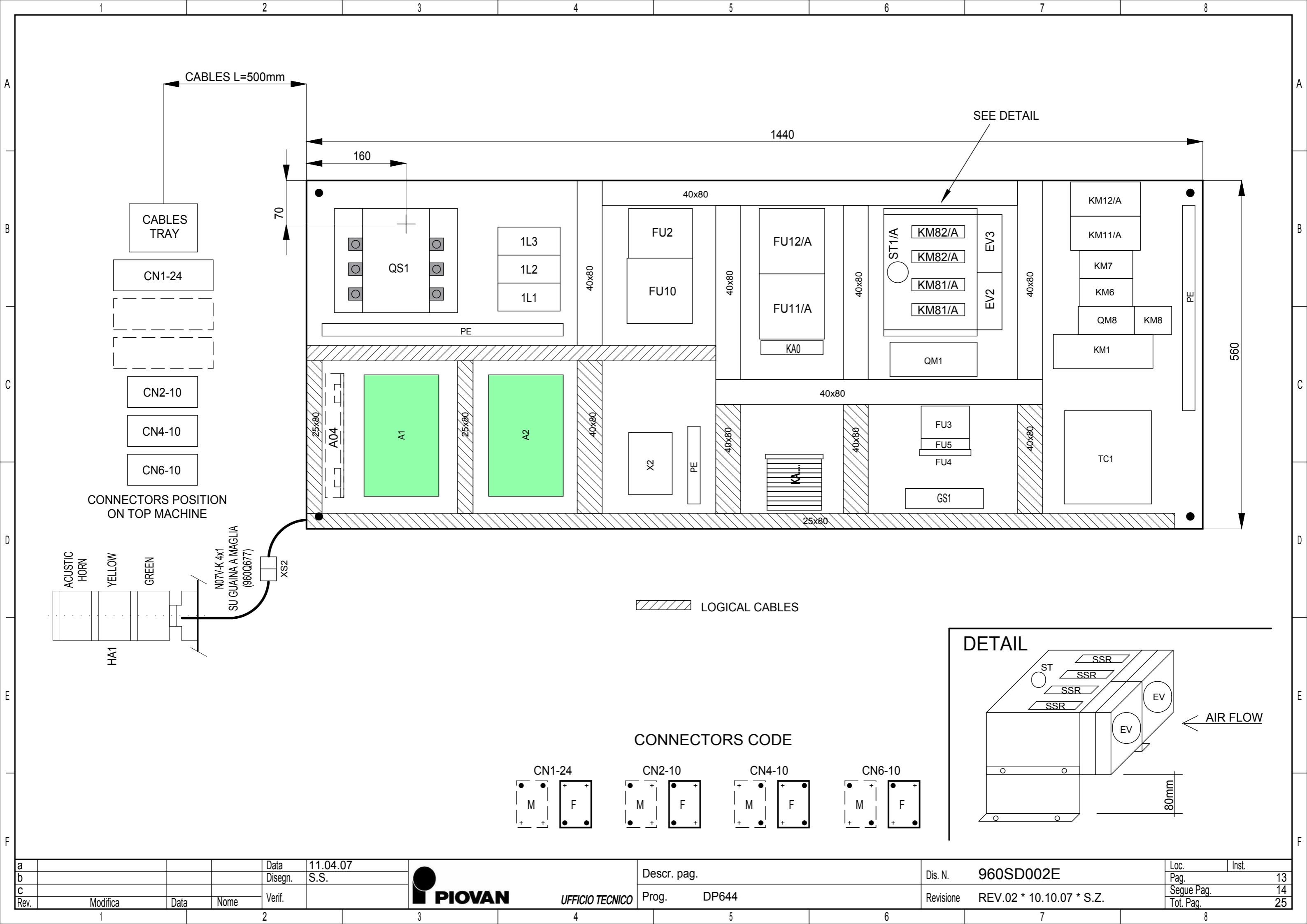


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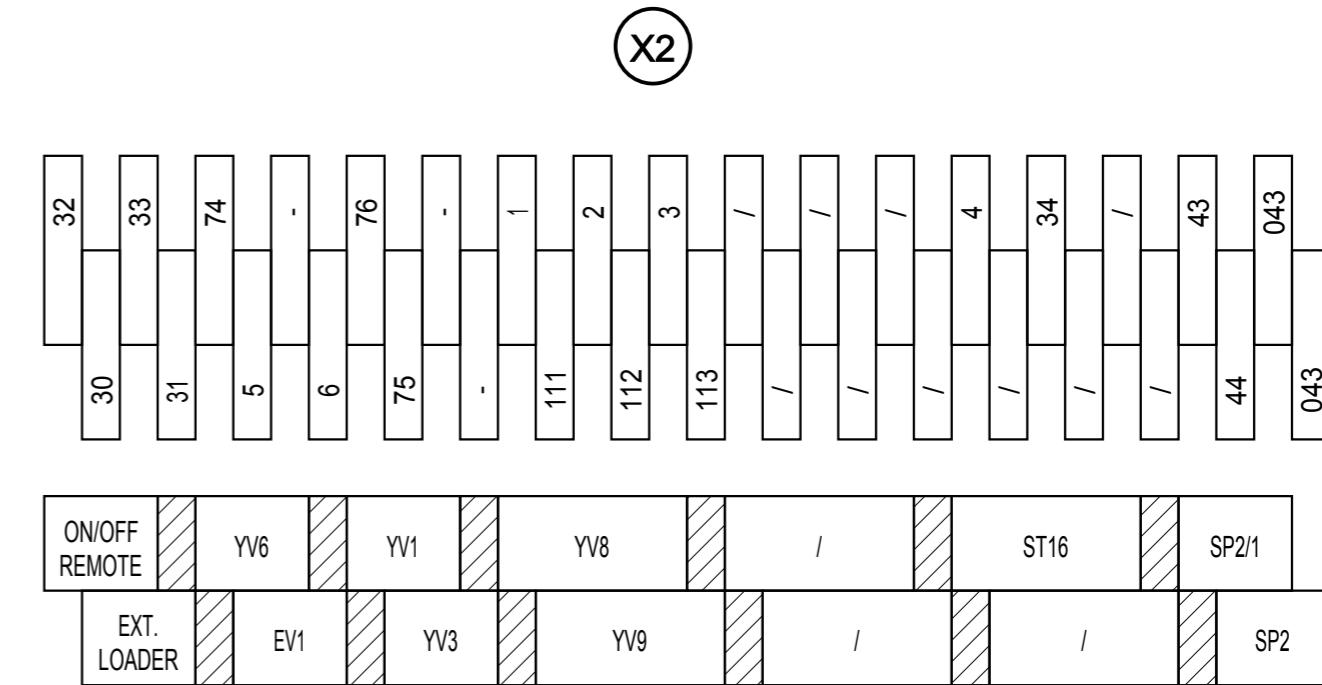
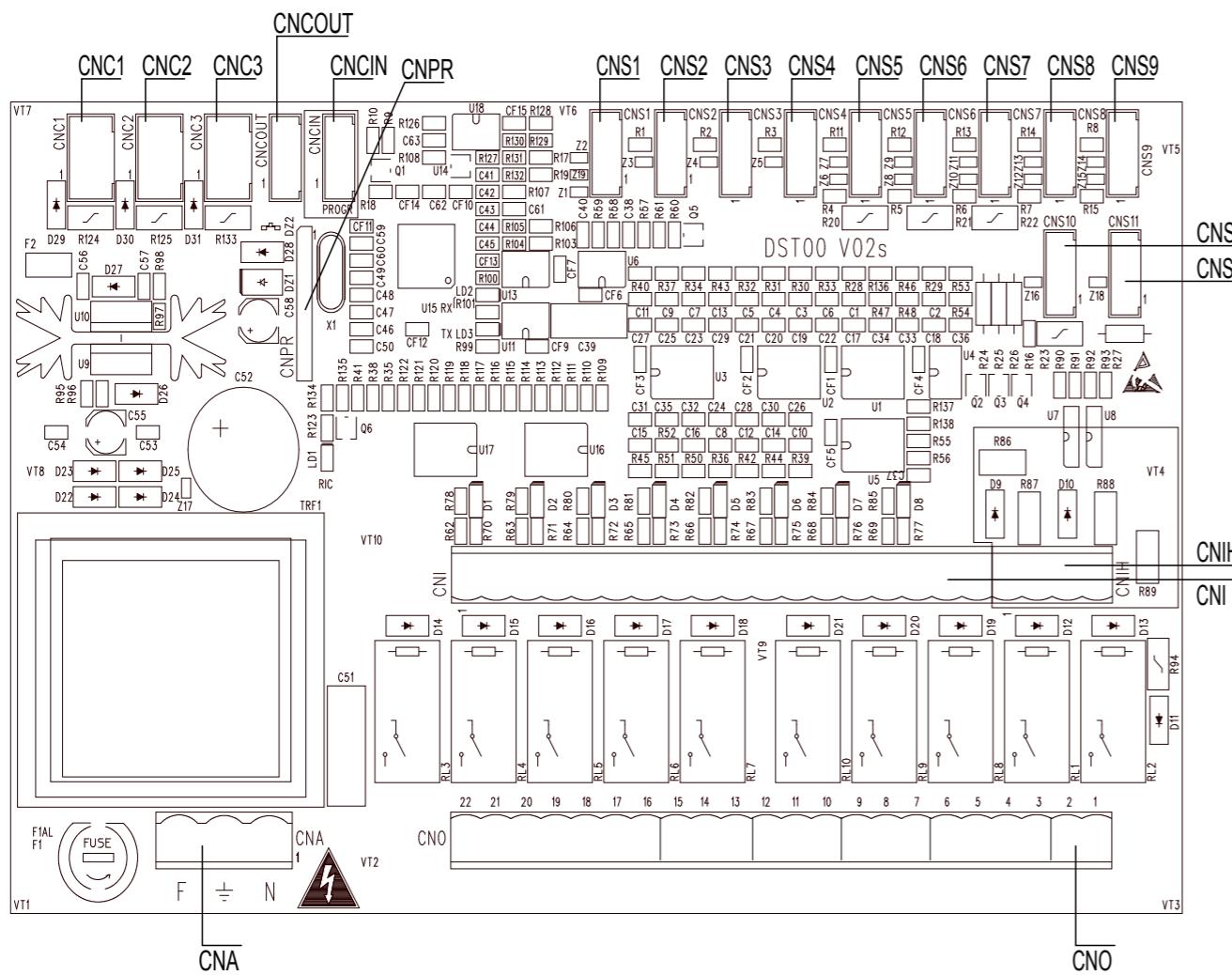


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LAY-OUT CARD A1 / A2



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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A
	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	
B	-A1	SCHEDA TERMOSTATAZIONE THERMOSTATIC BOARD THERMOSTATKARTE FICHIER TERMOSTATATION FICHA TERMOSTATACION	963S071	963S071	PIOVAN	/3.B1	B
C	-A2	SCHEDA TERMOSTATAZIONE THERMOSTATIC BOARD THERMOSTATKARTE FICHIER TERMOSTATATION FICHA TERMOSTATACION	963S071	963S071	PIOVAN	/8.B1	C
D	-A00	PANNELLO FRONTALE DI CONTROLLO FRONT PANEL OF CONTROLLER STEUERPANEEL PANNEAU FRONTAL DE CONTROLE PANEL FRONTAL DE CONTROL	963S072	963S072	PIOVAN	/2.B4	D
E	-A03	PROGRAMMATORE GIORNALIERO/SETTIMANALE (OPTIONAL) WEEKLY PROGRAMMER (OPTIONAL) WOCHEN PROGRAMMIERER (OPTIONAL) PROGRAMMATEUR HEBDOMANDAIRE (OPTIONAL) PROGRAMADOR SEMANAL (OPCIONAL)	963S073	963S073	PIOVAN	/2.B4	E
F	-A04	SCHEDA INTERFACCIA SERIALE RS 485 (OPTIONAL) RS 485 INTERFACE BOARD (OPTIONAL) SERIELLE SCHNITTSTELLENKARTE RS 485 (OPTIONAL) FICHIER D'INTERCONNEXION SERIELLE RS 485 (OPTIONAL) FICHA DE CONNEXION SERIAL RS 485 (OPCIONAL)	963S074	963S074	PIOVAN	/2.E4	F
G	-BT1	SONDA TEMP. INGRESSO SX TORRE RIGENERAZIONE TEMP. PROBE - LH REGEN. TOWER INLET TEMPERATURFUEHLER L.H. TURMEINGANG REGENERIERUNG SONDE DE LA TEMP. D'ENTREE SX DES TOURS DE REGENERATION SONDA TEMPERATURA INGRESO SX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D3	G
H	-BT2	SONDA TEMP. USCITA SX TORRE RIGENERAZIONE TEMP. PROBE - LH REGEN. TOWER OUTLET TEMPERATURFUEHLER L.H. TURMAUSGANG REGENERIERUNG SONDE DE LA TEMP. SORTIE SX DES TOURS DE REGENERATION SONDA TEMPERATURA SALIDA SX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D4	H
I	-BT3	SONDA TEMP. INGRESSO DX TORRE RIGENERAZIONE TEMP. PROBE - RH REGEN. TOWER INLET TEMPERATURFUEHLER R.H. TURMEINGANG REGENERIERUNG SONDE DE LA TEMP. D'ENTREE DX DES TOURS DE REGENERATION SONDA TEMPERATURA INGRESO DX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D3	I
J	-BT4	SONDA TEMP. USCITA DX TORRE RIGENERAZIONE TEMP. PROBE - RH REGEN. TOWER OUTLET TEMPERATURFUEHLER R.H. TURMAUSGANG REGENERIERUNG SONDE DE LA TEMP. SORTIE DX DES TOURS DE REGENERATION SONDA TEMPERATURA USCITA DX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D4	J
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b					Pag. Segue Pag.	Legend2	
c					Tot. Pag.	25	
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UFFICIO TECNICO

DP644

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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-BT6		SONDA TEMP. USCITA M1 TEMP. PROBE - OUTLET M1 TEMPERATURFUEHLER AUSGANG M1 SONDE DE LA TEMP. SORTIE M1 SONDA TEMPERATURA USCITA M1	(*1)	Pt 1000 OHM	STANDARD	/3.D5	B
-BT7		SONDA TEMP. USCITA M8 TEMP. PROBE - OUTLET M8 TEMPERATURFUEHLER AUSGANG M8 SONDE DE LA TEMP. SORTIE M8 SONDA TEMPERATURA USCITA M8	(*1)	Pt 1000 OHM	STANDARD	/3.D6	
-EH2		GRUPPO RESISTENZE DI RIGENERAZIONE SX LH REGENERATION HEATERS REGENERIERUNGS HEIZUNG LINKS GROUPE DES RESISTANCES DE REGENERATION SX GRUPO RESISTENCIAS DE REGENERACION SX	(*1)		STANDARD	/1.E7	C
-EH3		GRUPPO RESISTENZE DI RIGENERAZIONE DX RH REGENERATION HEATERS REGENERIERUNGS HEIZUNG RECHTS GROUPE DES RESISTANCES DE REGENERATION DX GRUPO RESISTENCIAS DE REGENERACION DX	(*1)		STANDARD	/1.E8	
-EH11/A		GRUPPO RESISTENZE DI PROCESSO A PROCESS HEATERS A PROZESSHEIZUNG A GROUPE DES RESISTANCES DE PROCESSUS A GRUPO RESISTENCIAS DE PROCESO A	(*1)		STANDARD	/1.E4	D
-EH12/A		GRUPPO RESISTENZE DI PROCESSO A PROCESS HEATERS A PROZESSHEIZUNG A GROUPE DES RESISTANCES DE PROCESSUS A GRUPO RESISTENCIAS DE PROCESO A	(*1)		STANDARD	/1.E5	
-EV1		CONDIZIONATORE QUADRO ELETTRICO ELECTRIC BOX AIR CONDITIONER KLIMATISATOR - SCHALTSCHRANK CONDITIONNEUR TABLEAU ELECTRIQUE ACONDICIONADOR DE AIRE PARA TABLERO ELECTRICO	4500110	SK3302.100	RITTAL		E
-EV1		VENTILATORE QUADRO ELETTRICO VENTILATOR FOR ELECTRICAL BOX VENTILATOR - SCHALTSCHRANK VENTILATEUR TABLEAU ELECTRIQUE VENTILADOR PARA TABLERO ELECTRICO	4170523	VE2522	ZANARDO	/2.E3	E
-EV2		VENTILATORE SSR VENTILATOR SSR VENTILATOR SSR VENTILATEUR SSR VENTILADOR SSR	4170532	SP9225	2F	/2.C6	F
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-EV3		VENTILATORE SSR VENTILATOR SSR VENTILATOR SSR VENTILATEUR SSR VENTILADOR SSR	4170532	SP9225	2F	/2.C7	C
-FU0		FUSIBILI LINEA (A CURA CLIENTE) LINE FUSES-PROVIDED BY CUSTOMER SICHERUNG, VOM KUNDEN ZU INSTALLIEREN FUSIBLE DE RESEAU (AU SOIN DU CLIENT) FUSIBLES LINEA (A SOLICITUD CLIENTE)	STANDARD	/1.A2	D
-FU2		FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION	4521817	3NW6112-1	SIEMENS	/1.C7	E
-FU2		FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION	4521817	3NW6112-1	SIEMENS	/1.C7	F
-FU2		FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION	4521817	3NW6112-1	SIEMENS	/1.C7	G
-FU3		FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1	4521824	3NW8002-1	SIEMENS	/2.B2	H
-FU3		FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1	4521824	3NW8002-1	SIEMENS	/2.B2	I
-FU3		FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1	4521824	3NW8002-1	SIEMENS	/2.B2	J
-FU4		FUSIBILE PROTEZIONE 230VAC 230VAC PROTECTION FUSE SICHERUNGEN 230VAC FUSIBLES PROTECTION 230VAC FUSIBLES PROTECCION 230VAC	4520209	5x20 4A	STANDARD	/2.D3	K
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
B	-FU5	FUSIBILE PROTEZIONE 230VAC 230VAC PROTECTION FUSE SICHERUNGEN 230VAC FUSIBLES PROTECTION 230VAC FUSIBLES PROTECCION 230VAC	4521828	3NW8003-1	SIEMENS	/2.E3	B
C	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	C
D	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	D
E	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	E
F	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	F
G	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	G
H	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	H
I	-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5	I
J	-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5	J
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5		B
-GS1	ALIMENTATORE 24VDC POWER SUPPLY FOR 24VDC STROMVERSORGUNG 24VDC ALIMENTATEUR POUR 24VDC ALIMENTADOR POR 24VDC	4532294	6EP1332-2BA10	SIEMENS	/2.D6		
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570632	8WD44500FA 230V	SIEMENS	/6.D3		C
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570236	BA15D 240V	SIEMENS	/6.D3		
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570236	BA15D 240V	STANDARD	/6.D3		D
-KA0	RELE' CONTROLLO FASE RELAY-PHASE CONTROL RELAIS PHASENFOLGE RELAIS DE CONTROLE PHASE RELE CONTROL DE FASE	4513477	RM 84873 299	TELEMECANIQUE	/2.D3		D
-KA1	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F2		E
-KA2	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F4		E
-KA3	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/10.E5		F
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	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.		
B	-KA4	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/10.E6	B	
	-KA6	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E5		
C	-KA7	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E7	C	
	-KA8	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E8		
D	-KA9	RELE' STATICO STATIC RELAY STATISCHES RELAIS RELAIS STATIQUE RELE ESTATICO	4513484	38.81.7.024.9024	FINDER	/5.C2	D	
	-KA10	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E2		
E	-KA11	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E3	E	
	-KA12	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E2		
F	-KA010	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F5	F	
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-KM1		CONTATTORE SOFFIANTE M1 M1 BLOWER CONTACTOR KONTAKTSCHALTER GEBLAEMOTOR M1 CONTACTEUR DU SOUFFLANTE M1 CONTACTOR SOPLADOR M1	4512377	3RW3036-1AB14	SIEMENS	/6.D2	B
-KM6		CONTATTORE RESIST. RIGENERAZIONE SX LH REGENERATION HEATER CONTACTOR KONTAKTSCHALTER HEIZELEMENT REGENERIERUNG LINKE CONTACTEUR DES RESISTANCES DE REGENERATION SX CONTACTOR RESISTENCIA REGENERACION SX	4512304	3RT1025-1AL20	SIEMENS	/5.E6	C
-KM7		CONTATTORE RESIST. RIGENERAZIONE DX RH REGENERATION HEATER CONTACTOR KONTAKTSCHALTER HEIZELEMENT REGENERIERUNG RECHTER CONTACTEUR DES RESISTANCES DE REGENERATION DX CONTACTOR RESISTENCIA REGENERACION DX	4512304	3RT1025-1AL20	SIEMENS	/5.E7	C
-KM8		CONTATTORE SOFFIANTE M8 M8 BLOWER CONTACTOR KONTAKTSCHALTER GEBLAEMOTOR M8 CONTACTEUR DU SOUFFLANTE M8 CONTACTOR SOPLADOR M8	4512302	3RT1016-1AP01	SIEMENS	/5.E8	D
-KM11/A		CONTATTORE SICUREZZA RESISTENZE EH11/A EH11/A HEATERS SAFETY CONTACTOR SICHERHEITS KONTAKTSCHALTER HEIZUNG EH11/A CONTACTEUR SECURITE RESISTANCES EH11/A CONTACTOR SEGURIDAD RESISTENCIAS EH11/A	4512306	3RT1034-1AL20	SIEMENS	/5.E4	D
-KM12/A		CONTATTORE SICUREZZA RESISTENZE EH12/A EH12/A HEATERS SAFETY CONTACTOR SICHERHEITS KONTAKTSCHALTER HEIZUNG EH12/A CONTACTEUR SECURITE RESISTANCES EH12/A CONTACTOR SEGURIDAD RESISTENCIAS EH12/A	4512306	3RT1034-1AL20	SIEMENS	/5.E5	E
-KM81/A		CONTATTORE COMANDO RESISTENZE EH11/A EH11/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH11/A CONTACTEUR RESISTANCES EH11/A CONTACTOR COMANDO RESISTENCIAS EH11/A	4701637	3RF2190-1AA04	SIEMENS	/5.F2	E
-KM81/A		CONTATTORE COMANDO RESISTENZE EH11/A EH11/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH11/A CONTACTEUR RESISTANCES EH11/A CONTACTOR COMANDO RESISTENCIAS EH11/A	4701637	3RF2190-1AA04	SIEMENS	/5.E2	F
-KM82/A		CONTATTORE COMANDO RESISTENZE EH12/A EH12/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH12/A CONTACTEUR RESISTANCES EH12/A CONTACTOR COMANDO RESISTENCIAS EH12/A	4701637	3RF2190-1AA04	SIEMENS	/5.E3	F
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-KM82/A		CONTATTORE COMANDO RESISTENZE EH12/A EH12/A HEATERS CONTROL CONTACTOR KONTAKSCHALTER PROZESSHEIZUNG EH12/A CONTACTEUR RESISTANCES EH12/A CONTACTOR COMANDO RESISTENCIAS EH12/A	4701637	3RF2190-1AA04	SIEMENS	/5.F3	B
-M1		MOTORE SOFFIANTE PROCESSO PROCESS BLOWER MOTOR PROZESSGEBLAEMOTOR MOTEUR SOUFFLANTE PROCESSUS MOTOR SOPLADOR DE PROCESO	(*)1		STANDARD	/1.E2	C
-M8		MOTORE SOFFIANTE RIGENERAZIONE REGENERATION BLOWER MOTOR REGENERIERUNGS GEGLAESE MOTOR MOTEUR SOUFFLANTE REGENERATION MOTOR SOPLADOR DE REGENERACION	(*)1		STANDARD	/1.E3	C
-QM1		MAGNETOTERMICO PROT. MOTORE M1 M1 MOTOR SAFETY CUTOUT THERMOSCHUETZ MOTOR M1 MAGNETOTHERMIQUE DE PROTECTION DU MOTEUR M1 MAGNETOTERMICO PROTECCION MOTOR M1	4514559	3RV1031-4FA10	SIEMENS	/1.C2	D
-QM8		MAGNETOTERMICO PROT. MOTORE M8 M8 MOTOR SAFETY CUTOUT THERMOSCHUETZ MOTOR M8 MAGNETOTHERMIQUE DE PROTECTION DU MOTEUR M8 MAGNETOTERMICO PROTECCION MOTOR M8	4514550	3RV1011-1FA10	SIEMENS	/1.C3	D
-QS1		INTERRUTTORE GENERALE MAIN SWITCH HAUPTSCHALTER INTERRUPTEUR GENERAL INTERRUPTOR GENERAL	4514897	3KA7123-3AA00	SIEMENS	/1.B2	E
-R1		RESISTENZA HEATER HEIZUNG RESISTANCE RESISTENCIA	4700102	500Ω 1/2W 1%	STANDARD	/3.C8	E
-R2		RESISTENZA HEATER HEIZUNG RESISTANCE RESISTENCIA	4700102	500Ω 1/2W 1%	STANDARD	/8.C8	F
-SP1		PRESSOSTATO ARIA COMPRESSA COMPRESSED AIR PRESSURE SWITCH DRUCKWACHTER DRUCKLUFT PRESSOSTAT DE L'AIR COMPRIME PRESOSTATO AIRE COMPRIMIDO	(*)1		STANDARD	/4.D5	F

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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	
B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	
-SP2	PRESSOSTATO DIFFERENZIALE INTASAMENTO FILTRI DIFF. PRESSURE SWITCH-FILTERS CLOGGED DIFFERENTIAL DRUCKWACHTER FILTERVERSTOPFUNG PRESSOSTAT DIFERNETIEL DE L'ENCRASSEMENT DES FILTRES PRESOSTATO DIFERENCIAL ATASCAMIENTO FILTROS	(*)			STANDARD	/4.D6	
-SP2/1	PRESSOSTATO INTASAMENTO FILTRI (OPTIONAL) DIFF. PRESSURE SWITCH-FILTERS CLOGGED (OPTIONAL) DIFFERENTIAL DRUCKWACHTER FILTERVERSTOPFUNG (OPTIONAL) PRESSOSTAT DIFERNETIEL DE L'ENCRASSEMENT DES FILTRES (OPTIONAL) PRESOSTATO DIFERENCIAL ATASCAMIENTO FILTROS (OPCIONAL)	(*)			STANDARD	/4.B6	
-SQ1	MICRO PORTA FILTRI APERTA AIR FILTERS OPEN GATE FILTERTUER GEOEFFNET MICRO INT. PORTE FILTRE OUVERTE MICRO PUERTA FILTROS ABIERTA	(*)			STANDARD	/9.D2	
-ST1/A	TERMOSTATO DI SICUREZZA SSR SAFETY THERMOSTAT SSR SICHERHEITSTHERMOSTAT SSR THERMOSTAT DE SECURITE SSR TERMOSTATO DE SEGURIDAD SSR	4152078	339-308		RS	/9.D3	
-ST15/A	TERMOSTATO SOVRATEMP. CAMERA RISCALD. A OVERTEMP. THERMOSTAT-PROCESS HEATER CHAMBER A UBERTEMPEARTUR THERMOSTAT HEIZKAMMER A THERMOSTAT DE SURTEMP. CHAMBRE RECHAUFFAGE A TERMOSTATO SOBRE TEMP. CAMARA CALENTAMIENTO A	(*)			STANDARD	/4.D4	
-ST16	TERMOSTATO SOVRATEMP. CAMERA RIGEN. SX LEFT REGENERATION HEATERS CHAMBER OVERTEMP. SWITCH UBERTEMPEARTUR THERMOSTAT REGENERIERUNGSHEITSKAMMER LINKS THERMOSTAT DE SURTEMP. CHAMBRE REGENERATION SX TERMOSTATO SOBRE TEMP. CAMARA REGENERACION SX	(*)			STANDARD	/4.D3	
-ST17	TERMOSTATO SOVRATEMP. CAMERA RIGEN. DX RIGHT REGENERATION HEATERS CHAMBER OVERTEMP. SWITCH UBERTEMPEARTUR THERMOSTAT REGENERIERUNGSHEITSKAMMER RECHTS THERMOSTAT DE SURTEMP. CHAMBRE REGENERATION DX TERMOSTATO SOBRE TEMP. CAMARA REGENERACION DX	(*)			STANDARD	/4.D4	
-STD1	DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL)	4151533	DMT242A		VAISALA	/3.E7	
-STD1	DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL)	4151530	EAS-TX-80		MICHELL	/3.D7	

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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A
B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-TC1		TRASFORMATORE TRANSFORMER TRANSFORMATOR TRANSFORMATEUR TRANSFORMADOR	4511505	700VA -15/0/15/230/400/460/480 S1=0/230 S2=0/230	C.E.	/2.D2	B
-YV1		ELETROVALVOLA CAMBIO TORRE TOWER-CHANGE SOLENOID VALVE COIL ELEKTROVENTILSPULE TURMWECHSEL ELECTROVANNE DE CHANGE DES TOURS ELECTROVALVULA CAMBIO TORRE	(*)		STANDARD	/7.D8	C
-YV3		ELETTROV. CORTO CIRCUITO ARIA RIGEN. (OPT.) REGENERATION AIR SHORT CIRCUIT SOLENOID VALVE (OPTIONAL) ELEKROVENTILSPULE - KURZSCHLUSS R.-LUFT (OPTIONAL) ELECTROVANNE DU CORT-CIRCUIT(OPTIONAL)	(*)		STANDARD	/7.D7	C
-YV6		ELETROVALVOLA CORTOCIRCUITO AIRE REGENERACION (OPCIONAL) ELETTROVALVOLA RAFFREDDAMENTO RIGENERAZIONE (H2O) REGENERATION COOLING SOLENOID VALVE (H2O) ELEKTROVENTILSPULE REGENERIERUNGS ABKHLUNG (H2O) ELECTROVANNE DE REFROIDISSEMENT REGENERATION (H2O)	(*)		STANDARD	/7.D6	D
-YV8		ELETROVALVOLA REGOLAZIONE ARIA AIR REGULATION SOLENOID VALVE ELEKTROVENTILSPULE REGELUNG LUFT ELECTROVANNE REGLAGE AIR ELECTROVALVULA REGULACION AIRE	(*)	STANDARD	/3.D8	D
-YV9		ELETROVALVOLA RAFFREDDAMENTO (H2O) COOLING SOLENOID VALVE (H2O) ELEKTROVENTILSPULE ABKHLUNG (H2O) ELECTROVANNE DE REFROIDISSEMENT (H2O) ELECTROVALVULA ENFRIMIENTO (H2O)	(*)	STANDARD	/8.D8	E
NOTA : (*)	CODICI PARTI RICAMBIO DA RICERCARE NELLA SEZIONE MECCANICA DEL MANUALE. SPARE PART CODES TO BE FOUND IN THE MECHANICAL SECTION OF THE MANUAL. DIE ERSATZTEILNUMMERN SIND IM MECHANISCHEN TEIL DES HANDBUCHES ENTHALTEN. CODE DE LA PIECE DE RECHANGE A RECHERCHER DANS LA PARTIE MECANIQUE DE CE LIVRET D'INSTRUCTION. LOS CODIGOS PIEZAS DE REPUESTO TIENEN QUE BUSCARSE EN LA SECCION MECANICA DEL MANUAL. OS CODIGOS DAS PEÇAS SOBRESALENTEIS DEVEM SER PROCURADOS NA SECAO MECANICA DO MANUAL.						
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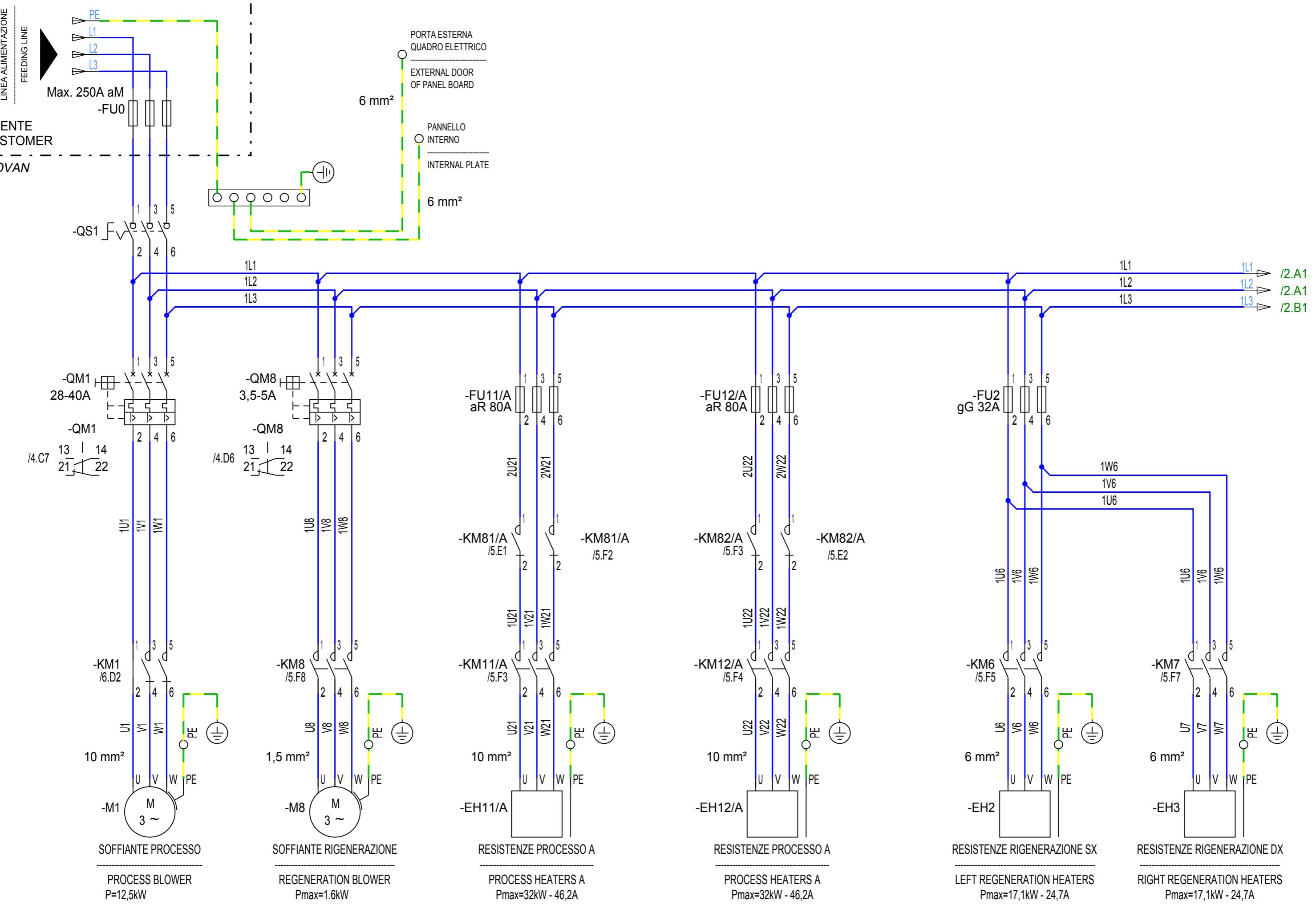
DP644

Project: 960SD056E

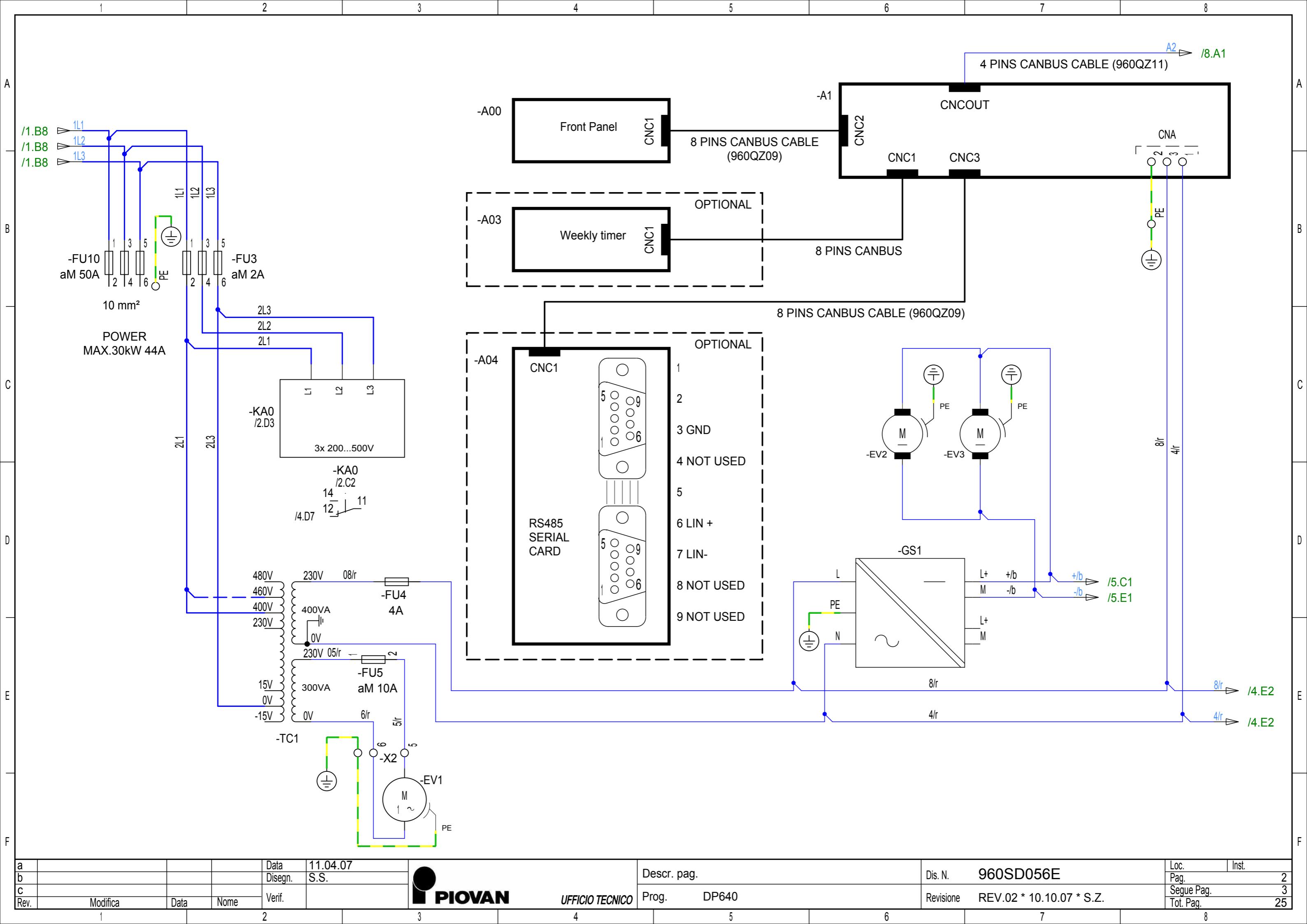
Alimentazione : Supply:	400V/50Hz ; 380V/60Hz ; 460V/60Hz / 3ph
Circuiti ausiliari : Auxiliary circuit :	230VAC ; 24VDC
Potenza installata : Installed power :	Max. 132kW
Corrente massima assorbita : Maximum load current :	Max. 204A
Corrente di spunto : Peak current :	Max. 496A
Protezione consigliata : Recommended protection :	Max. 250A aM
Max. sezione cavo alimentazione : Maximum section supply cable :	Flex cable : 120mm ² Rigid cable : / Bus bar : 20x5

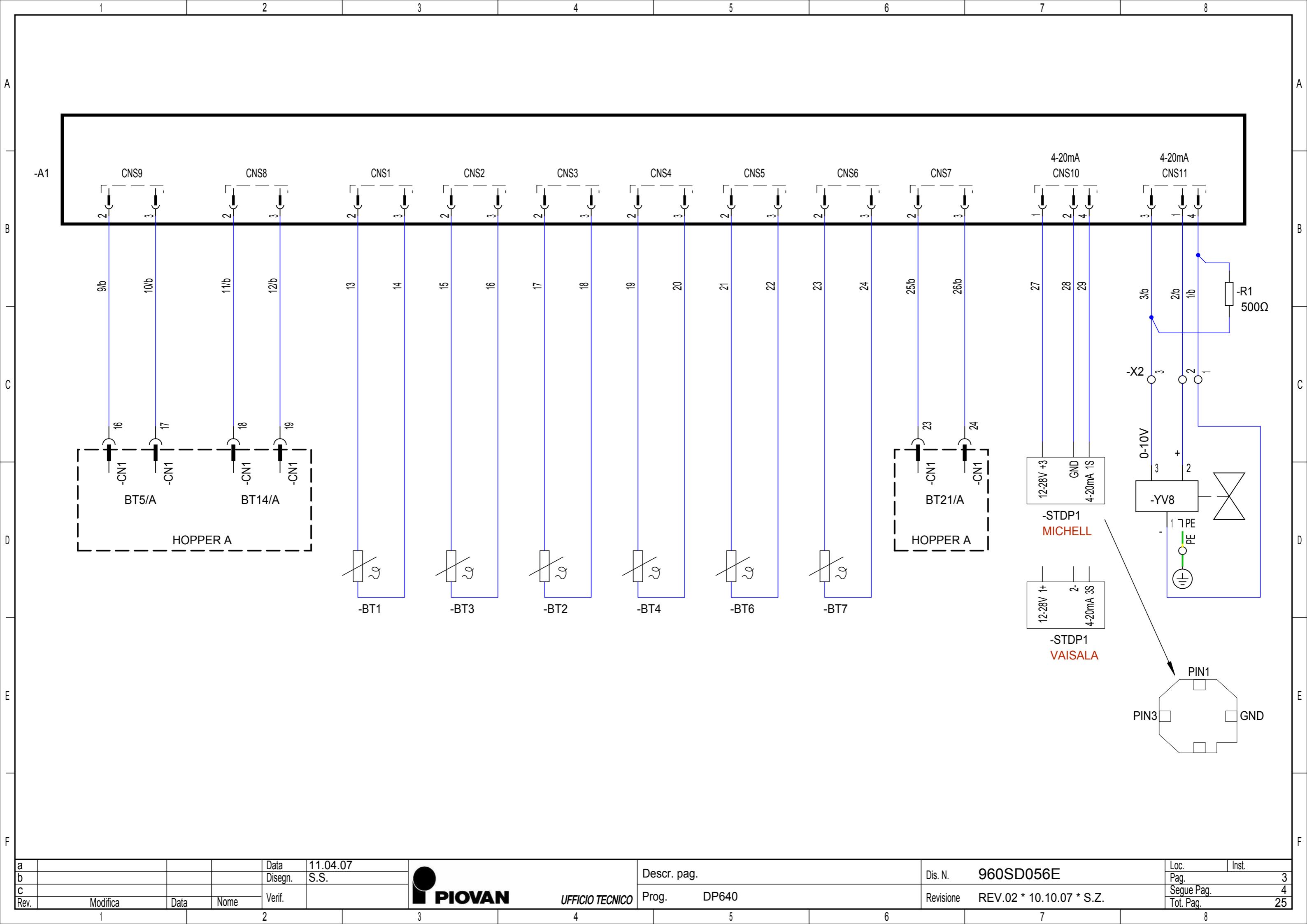
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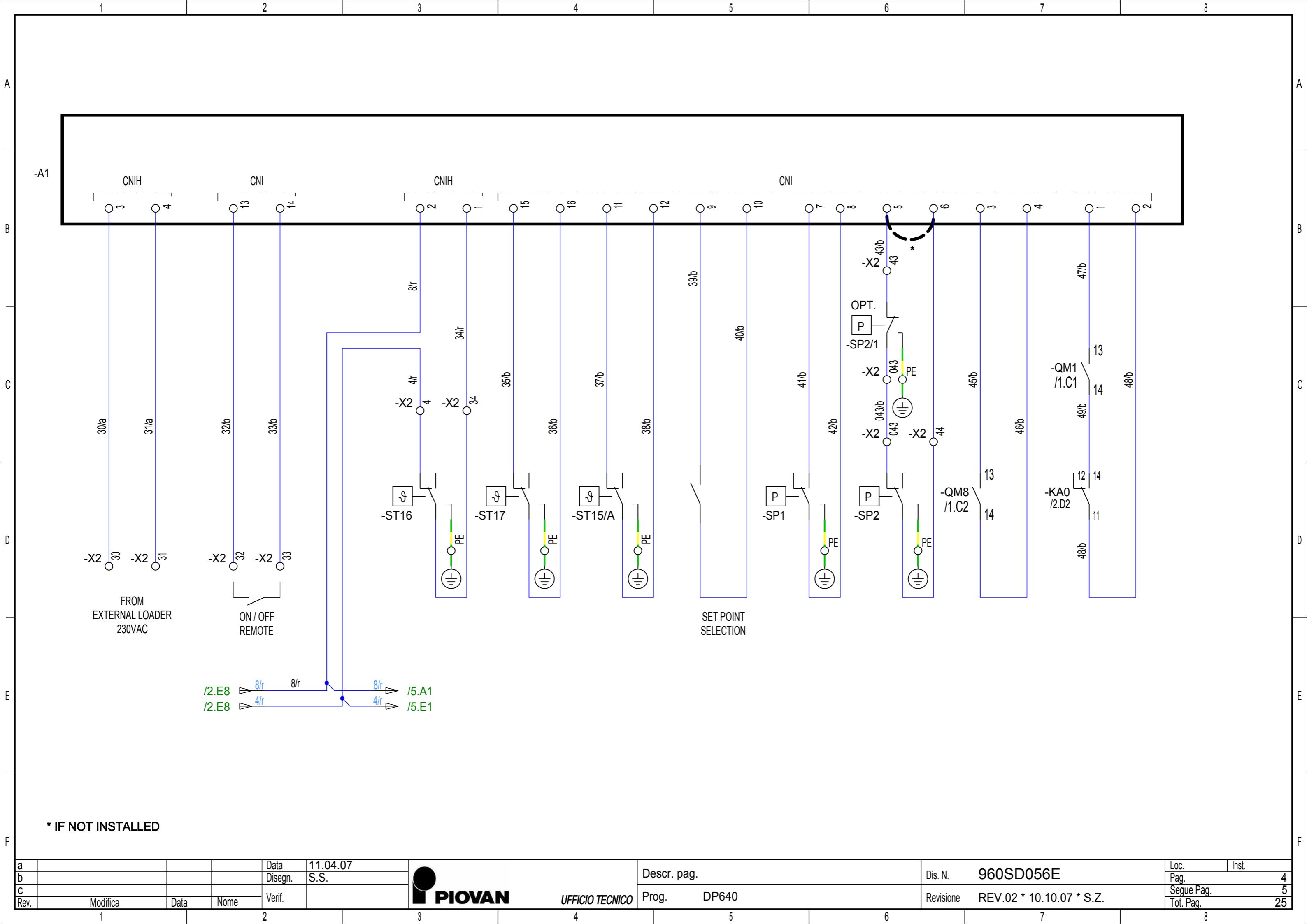
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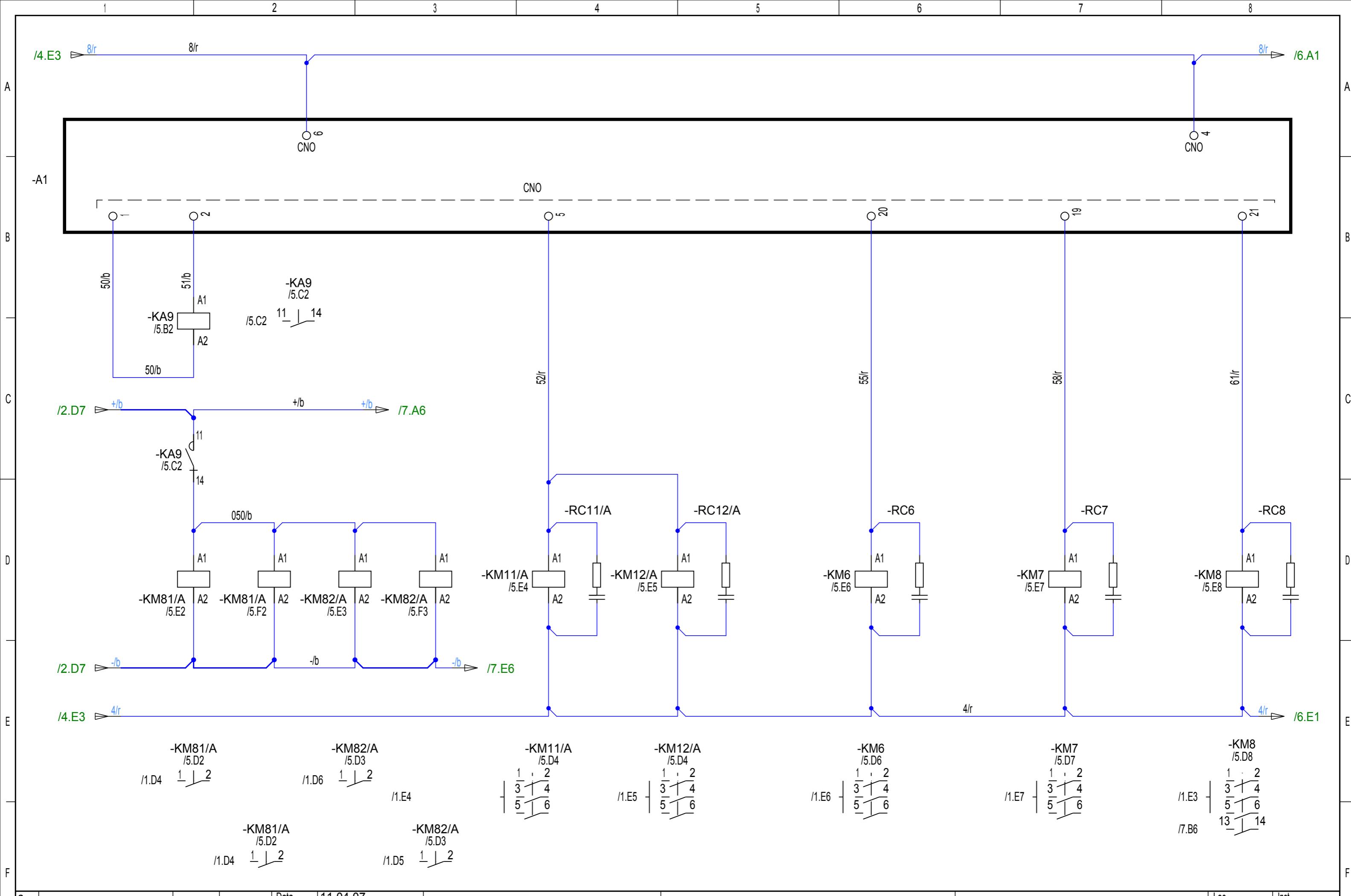
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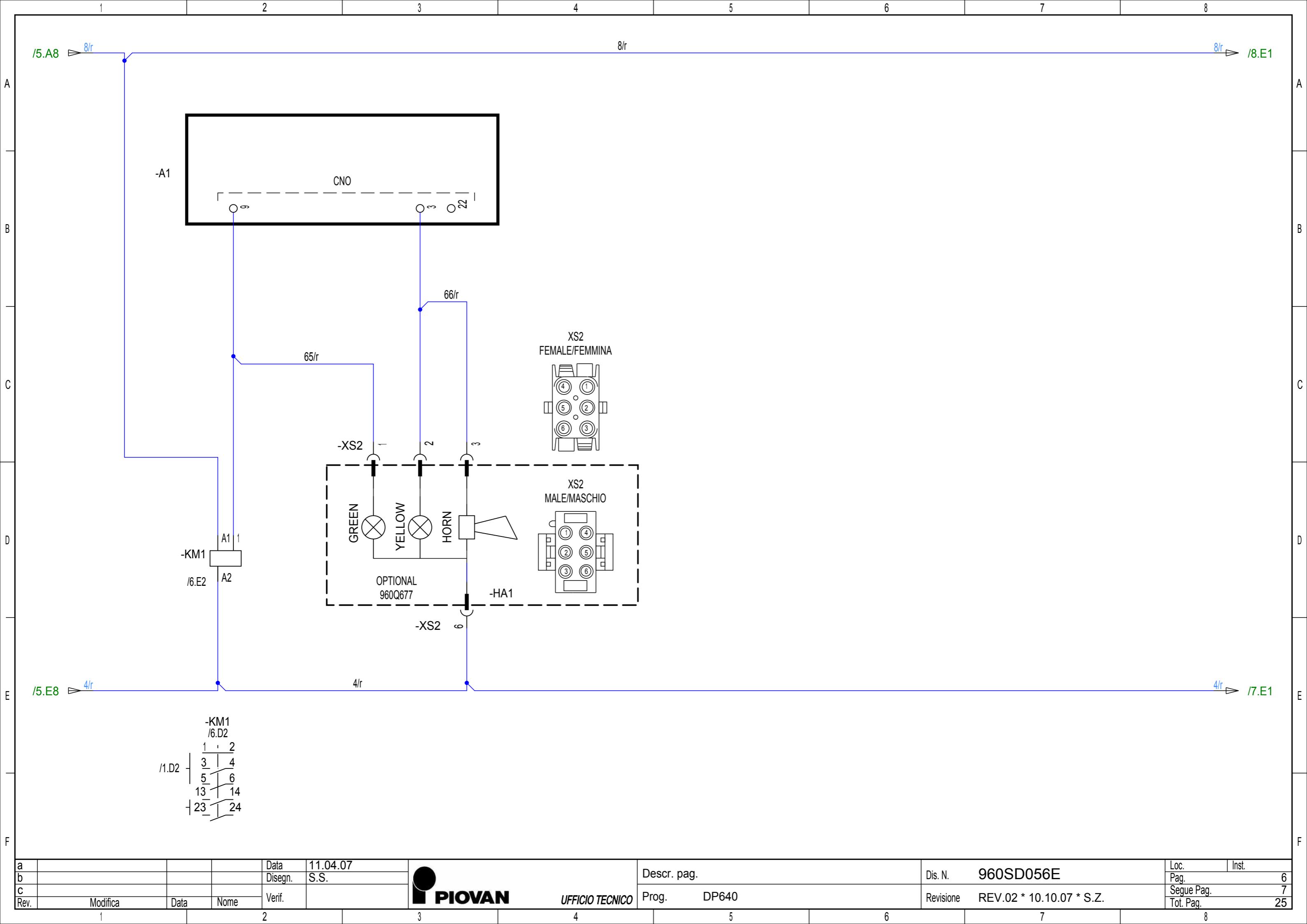


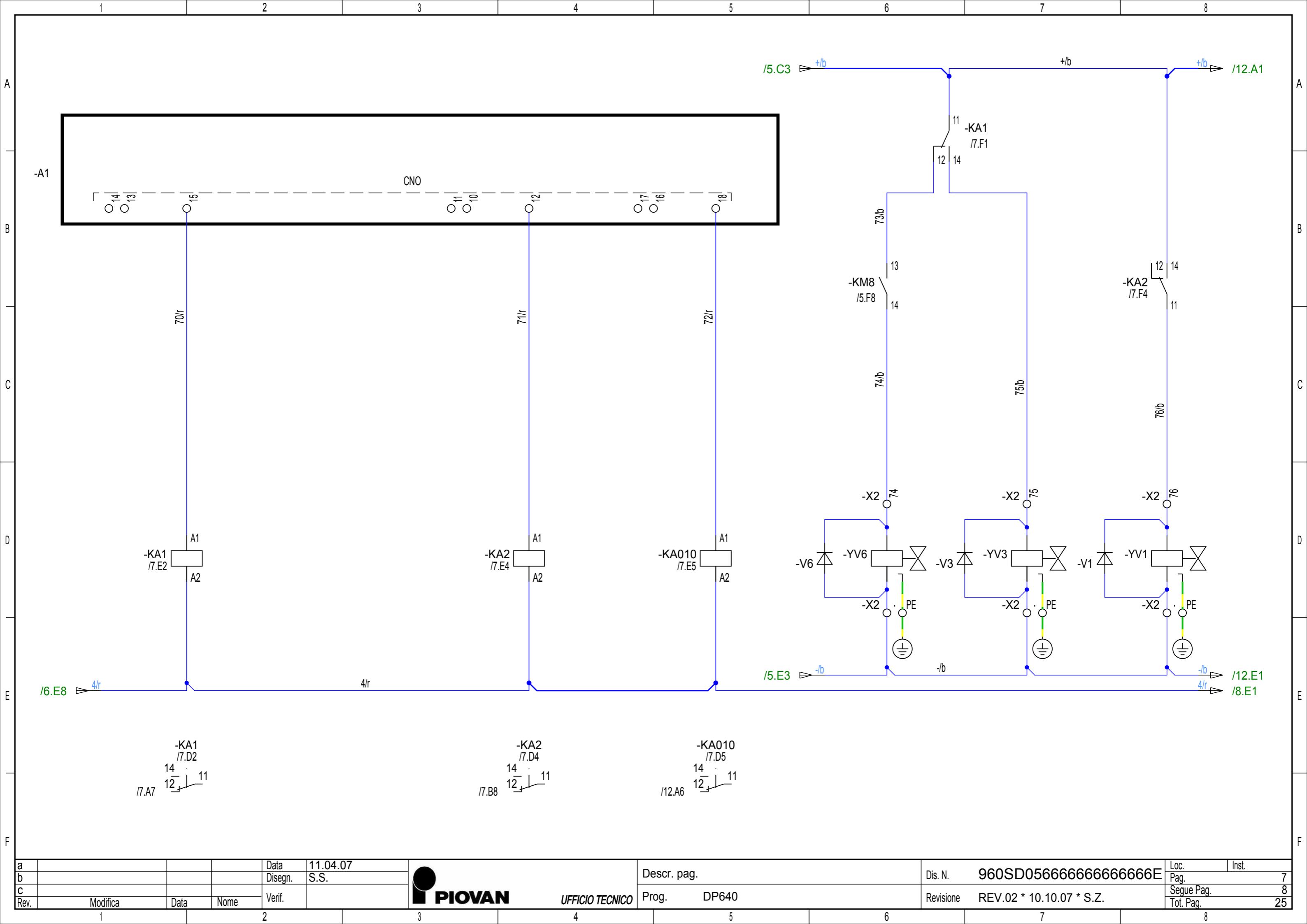


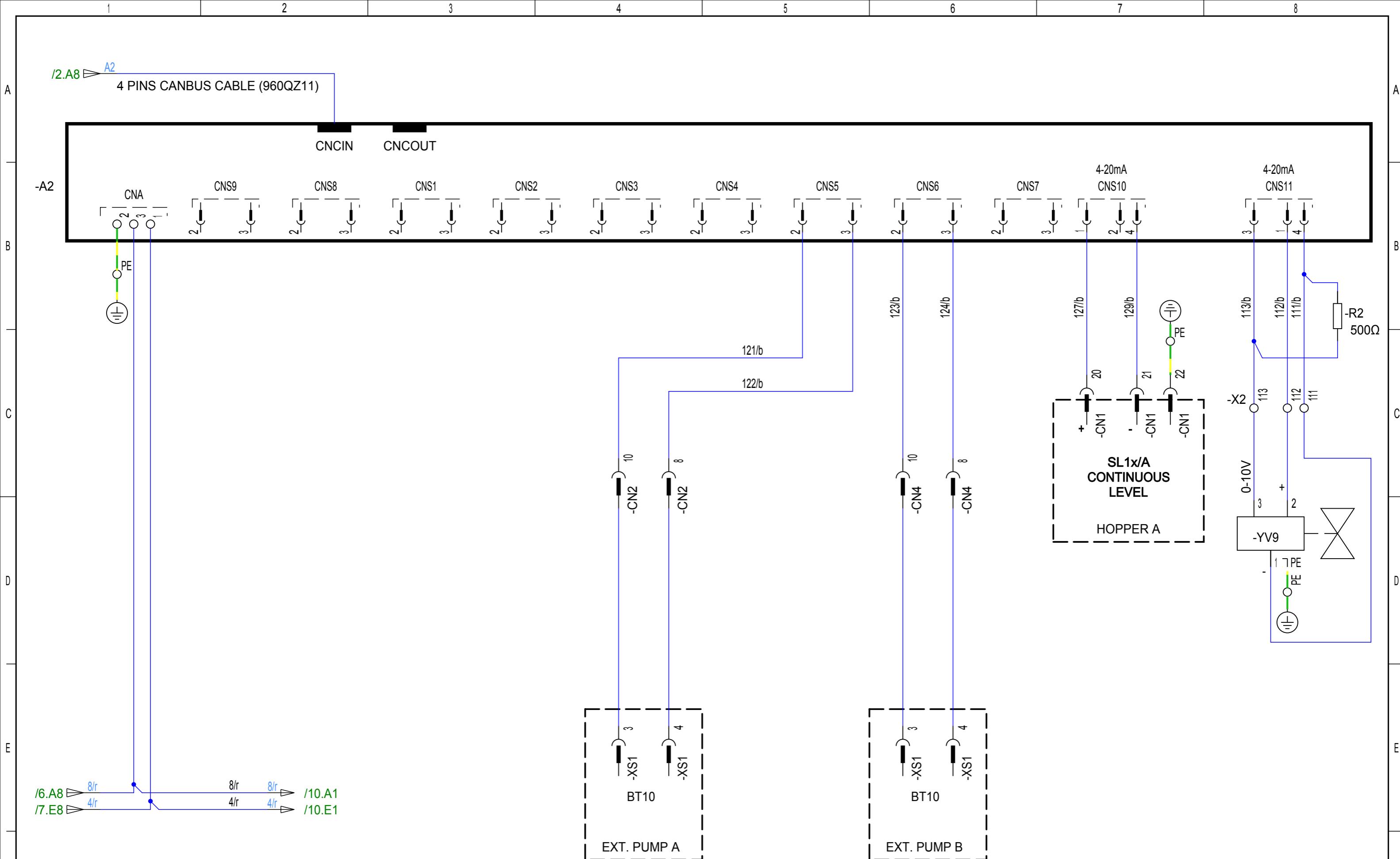
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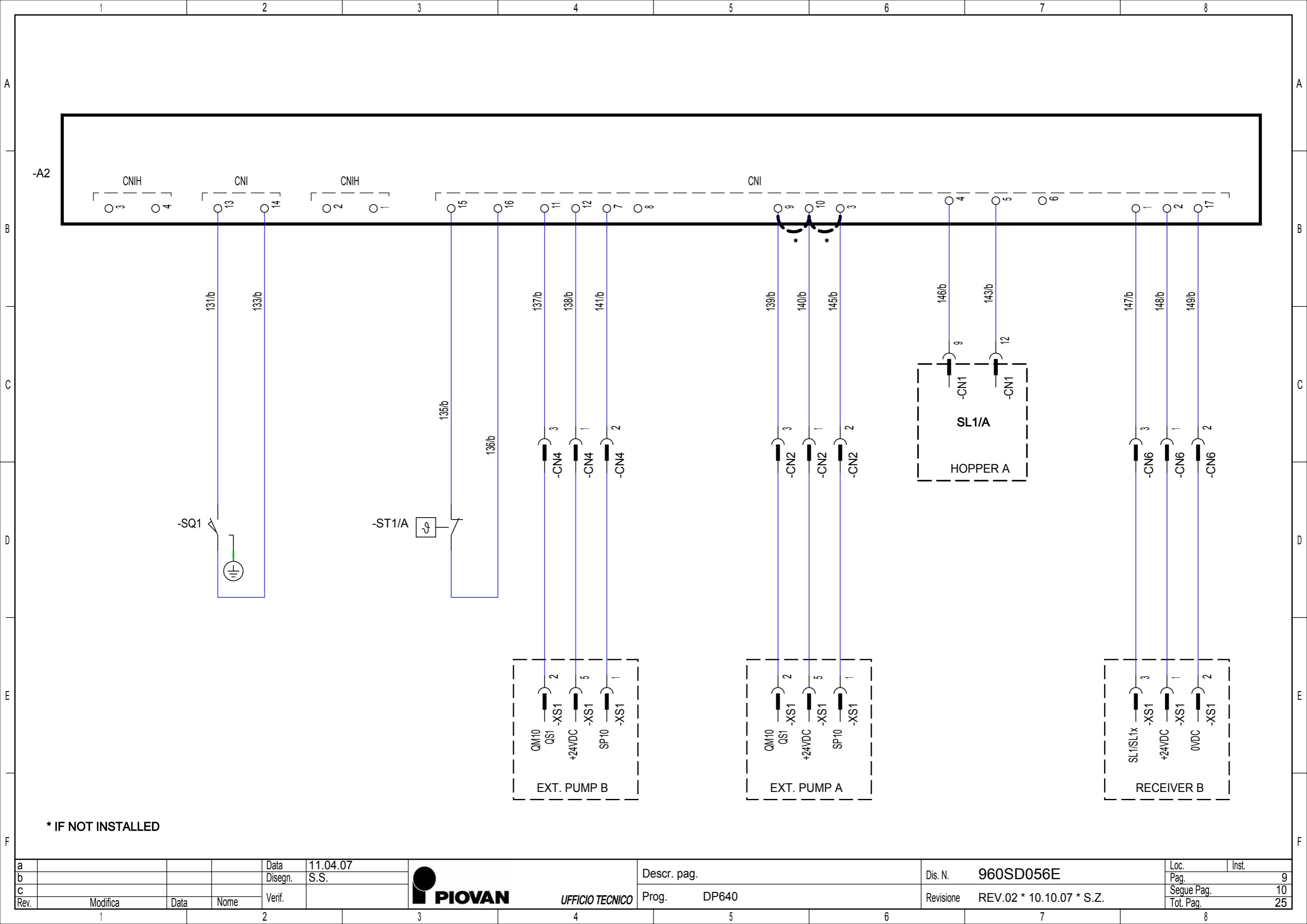
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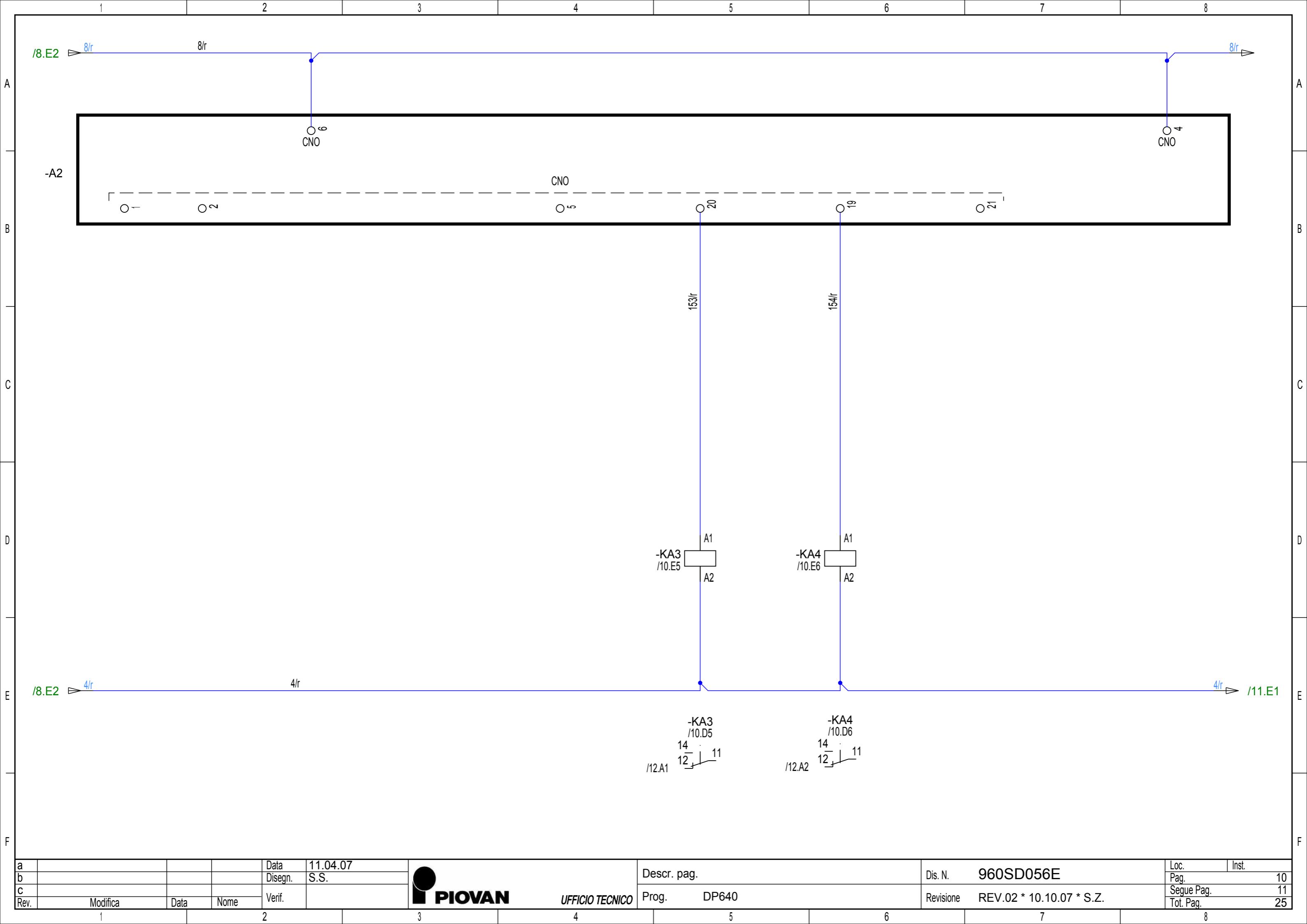




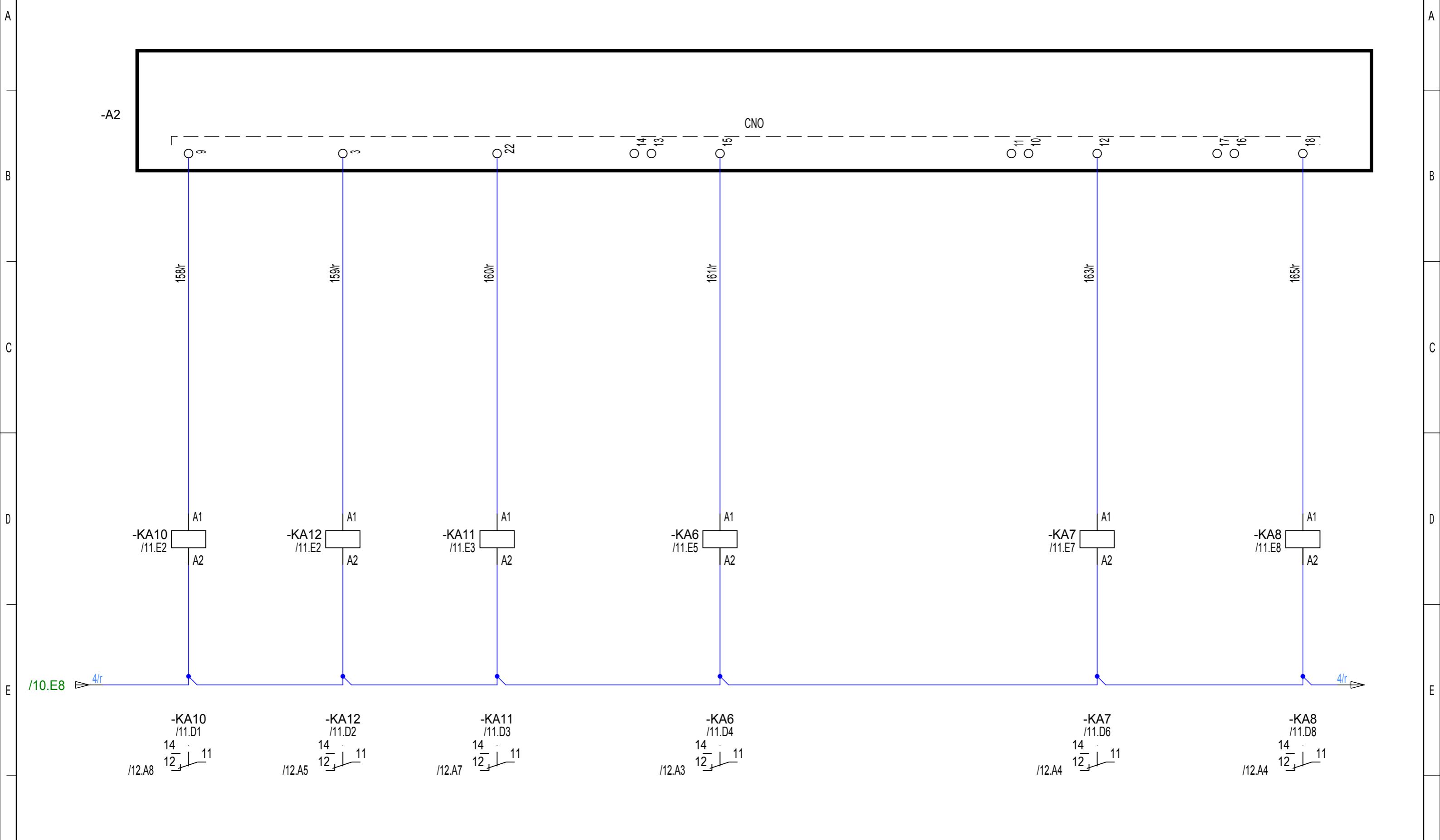


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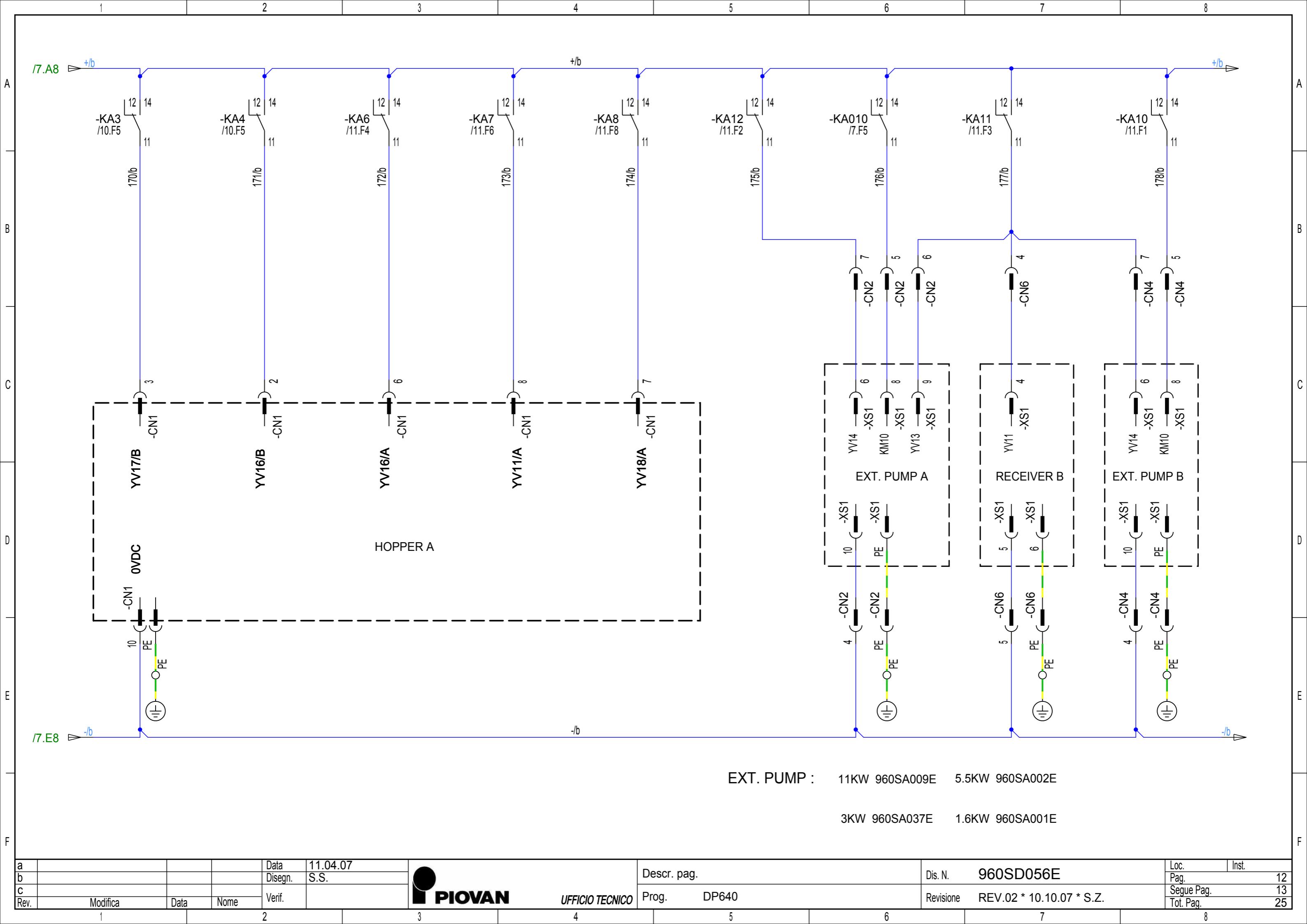


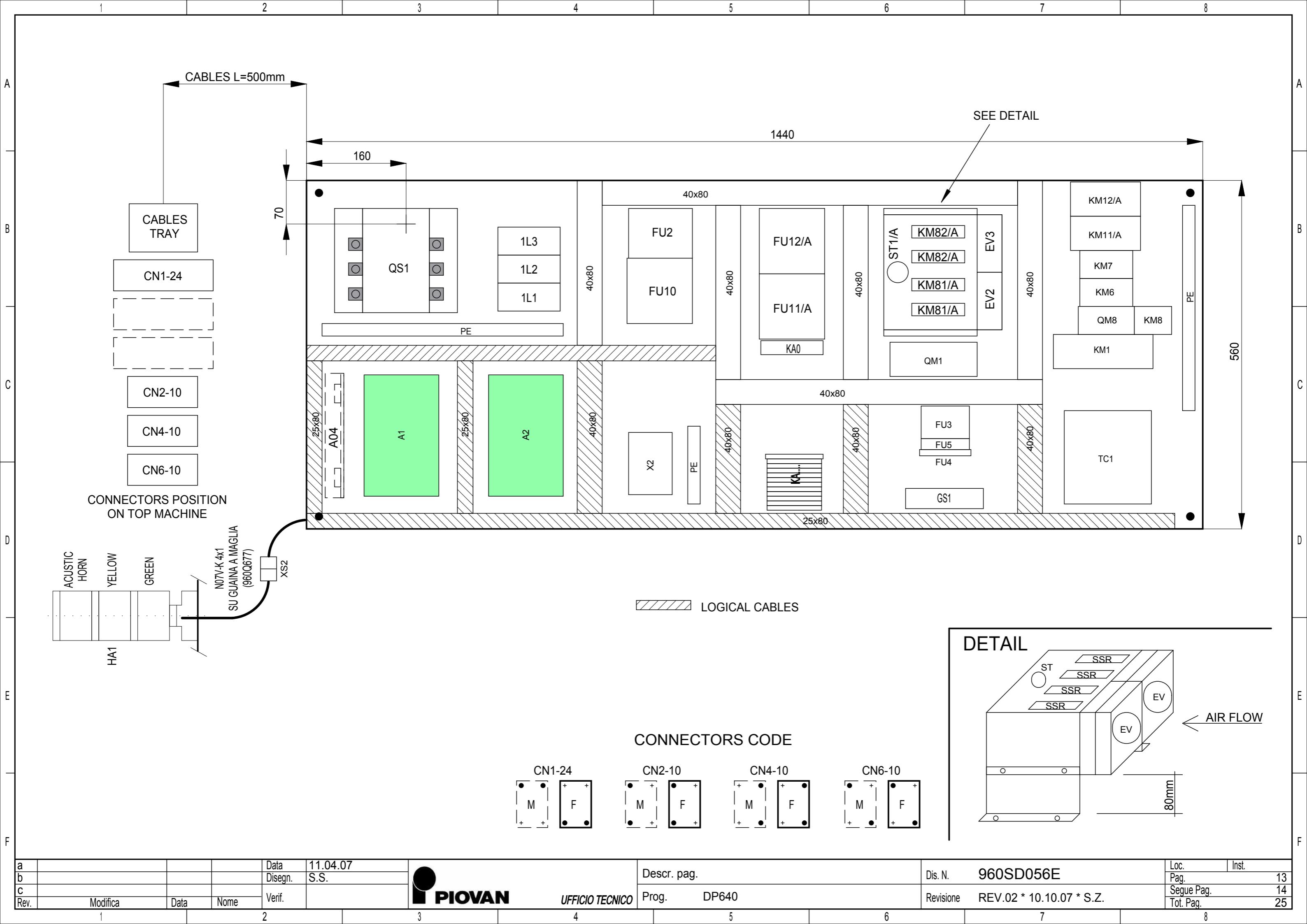


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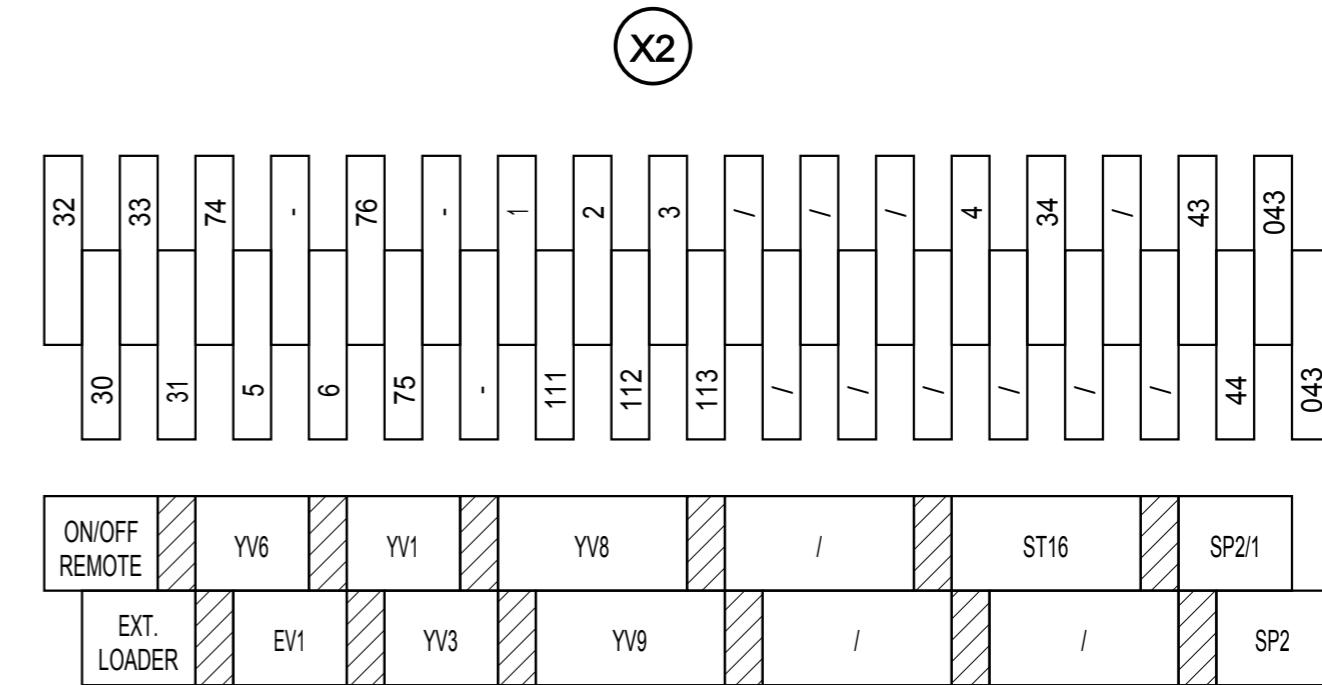
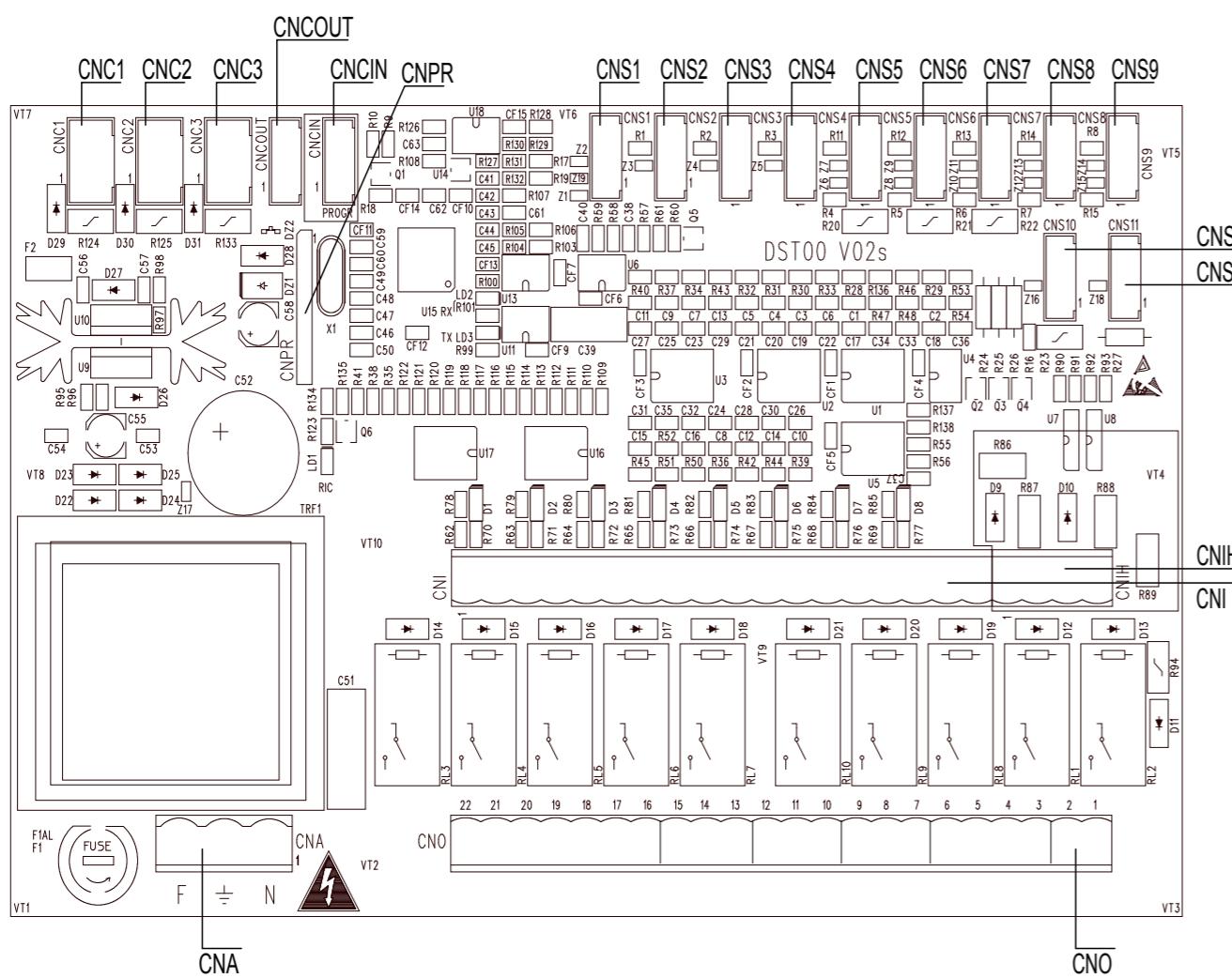
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A B C D E F

LAY-OUT CARD A1 / A2



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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A	
B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CÓDIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B	
-A1		SCHEDA TERMOSTATAZIONE THERMOSTATIC BOARD THERMOSTATKARTE FICHIER TERMOSTATATION FICHA TERMOSTATACION	963S071	963S071	PIOVAN	/3.B1	B	
-A2		SCHEDA TERMOSTATAZIONE THERMOSTATIC BOARD THERMOSTATKARTE FICHIER TERMOSTATATION FICHA TERMOSTATACION	963S071	963S071	PIOVAN	/8.B1	B	
-A00		PANNELLO FRONTALE DI CONTROLLO FRONT PANEL OF CONTROLLER STEUERPANEEL PANNEAU FRONTAL DE CONTROLE PANEL FRONTAL DE CONTROL	963S072	963S072	PIOVAN	/2.B4	C	
-A03		PROGRAMMATORE GIORNALIERO/SETTIMANALE (OPTIONAL) WEEKLY PROGRAMMER (OPTIONAL) WOCHEN PROGRAMMIERER (OPTIONAL) PROGRAMMATEUR HEBDOMANDAIRE (OPTIONAL) PROGRAMADOR SEMANAL (OPCIONAL)	963S073	963S073	PIOVAN	/2.B4	C	
-A04		SCHEDA INTERFACCIA SERIALE RS 485 (OPTIONAL) RS 485 INTERFACE BOARD (OPTIONAL) SERIELLE SCHNITTSTELLENKARTE RS 485 (OPTIONAL) FICHIER D'INTERCONNEXION SERIELLE RS 485 (OPTIONAL) FICHA DE CONNEXION SERIAL RS 485 (OPCIONAL)	963S074	963S074	PIOVAN	/2.E4	D	
-BT1		SONDA TEMP. INGRESSO SX TORRE RIGENERAZIONE TEMP. PROBE - LH REGEN. TOWER INLET TEMPERATURFUEHLER L.H. TURMEINGANG REGENERIERUNG SONDE DE LA TEMP. D'ENTREE SX DES TOURS DE REGENERATION SONDA TEMPERATURA INGRESO SX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D3	D	
-BT2		SONDA TEMP. USCITA SX TORRE RIGENERAZIONE TEMP. PROBE - LH REGEN. TOWER OUTLET TEMPERATURFUEHLER L.H. TURMAUSGANG REGENERIERUNG SONDE DE LA TEMP. SORTIE SX DES TOURS DE REGENERATION SONDA TEMPERATURA SALIDA SX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D4	E	
-BT3		SONDA TEMP. INGRESSO DX TORRE RIGENERAZIONE TEMP. PROBE - RH REGEN. TOWER INLET TEMPERATURFUEHLER R.H. TURMEINGANG REGENERIERUNG SONDE DE LA TEMP. D'ENTREE DX DES TOURS DE REGENERATION SONDA TEMPERATURA INGRESO DX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D3	E	
-BT4		SONDA TEMP. USCITA DX TORRE RIGENERAZIONE TEMP. PROBE - RH REGEN. TOWER OUTLET TEMPERATURFUEHLER R.H. TURMAUSGANG REGENERIERUNG SONDE DE LA TEMP. SORTIE DX DES TOURS DE REGENERATION SONDA TEMPERATURA USCITA DX TORRE REGENERACION	(*1)	Pt 1000 OHM	STANDARD	/3.D4	F	
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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A
B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-BT6		SONDA TEMP. USCITA M1 TEMP. PROBE - OUTLET M1 TEMPERATURFUEHLER AUSGANG M1 SONDE DE LA TEMP. SORTIE M1 SONDA TEMPERATURA USCITA M1	(*1)	Pt 1000 OHM	STANDARD	/3.D5	B
-BT7		SONDA TEMP. USCITA M8 TEMP. PROBE - OUTLET M8 TEMPERATURFUEHLER AUSGANG M8 SONDE DE LA TEMP. SORTIE M8 SONDA TEMPERATURA USCITA M8	(*1)	Pt 1000 OHM	STANDARD	/3.D6	
-EH2		GRUPPO RESISTENZE DI RIGENERAZIONE SX LH REGENERATION HEATERS REGENERIERUNGS HEIZUNG LINKS GROUPE DES RESISTANCES DE REGENERATION SX GRUPO RESISTENCIAS DE REGENERACION SX	(*1)		STANDARD	/1.E7	C
-EH3		GRUPPO RESISTENZE DI RIGENERAZIONE DX RH REGENERATION HEATERS REGENERIERUNGS HEIZUNG RECHTS GROUPE DES RESISTANCES DE REGENERATION DX GRUPO RESISTENCIAS DE REGENERACION DX	(*1)		STANDARD	/1.E8	
-EH11/A		GRUPPO RESISTENZE DI PROCESSO A PROCESS HEATERS A PROZESSHEIZUNG A GROUPE DES RESISTANCES DE PROCESSUS A GRUPO RESISTENCIAS DE PROCESO A	(*1)		STANDARD	/1.E4	D
-EH12/A		GRUPPO RESISTENZE DI PROCESSO A PROCESS HEATERS A PROZESSHEIZUNG A GROUPE DES RESISTANCES DE PROCESSUS A GRUPO RESISTENCIAS DE PROCESO A	(*1)		STANDARD	/1.E5	
-EV1		CONDIZIONATORE QUADRO ELETTRICO ELECTRIC BOX AIR CONDITIONER KLIMATISATOR - SCHALTSCHRANK CONDITIONNEUR TABLEAU ELECTRIQUE ACONDICIONADOR DE AIRE PARA TABLERO ELECTRICO	4500110	SK3302.100	RITTAL		E
-EV1		VENTILATORE QUADRO ELETTRICO VENTILATOR FOR ELECTRICAL BOX VENTILATOR - SCHALTSCHRANK VENTILATEUR TABLEAU ELECTRIQUE VENTILADOR PARA TABLERO ELECTRICO	4170523	VE2522	ZANARDO	/2.E3	E
-EV2		VENTILATORE SSR VENTILATOR SSR VENTILATOR SSR VENTILATEUR SSR VENTILADOR SSR	4170532	SP9225	2F	/2.C6	F
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B	
-EV3	VENTILATORE SSR VENTILATOR SSR VENTILATOR SSR VENTILATEUR SSR VENTILADOR SSR		4170532	SP9225	2F	/2.C7	B	
-FU0	FUSIBILI LINEA (A CURA CLIENTE) LINE FUSES-PROVIDED BY CUSTOMER SICHERUNG, VOM KUNDEN ZU INSTALLIEREN FUSIBLE DE RESEAU (AU SOIN DU CLIENT) FUSIBLES LINEA (A SOLICITUD CLIENTE)		STANDARD	/1.A2		
-FU2	FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION		4521817	3NW6112-1	SIEMENS	/1.C7	C	
-FU2	FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION		4521817	3NW6112-1	SIEMENS	/1.C7		
-FU2	FUSIBILI PROTEZIONE RESISTENZE RIGENERAZIONE REGENERATION HEATERS PROTECTION FUSES SICHERUNG REGENERIERUNGSHEIZUNG FUSIBLE DE PROTECTION DE RESISTANCES DE REGENERATION FUSIBLES PROTECCION RESISTENCIAS REGENERACION		4521817	3NW6112-1	SIEMENS	/1.C7	D	
-FU3	FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1		4521824	3NW8002-1	SIEMENS	/2.B2		
-FU3	FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1		4521824	3NW8002-1	SIEMENS	/2.B2	E	
-FU3	FUSIBILI PROTEZIONE TC1 PROTECTION FUSES TC1 SICHERUNG TC1 FUSIBLE PROTECTION TC1 FUSIBLES PROTECCION TC1		4521824	3NW8002-1	SIEMENS	/2.B2		
-FU4	FUSIBILE PROTEZIONE 230VAC 230VAC PROTECTION FUSE SICHERUNGEN 230VAC FUSIBLES PROTECTION 230VAC FUSIBLES PROTECCION 230VAC		4520209	5x20 4A	STANDARD	/2.D3	F	
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
B	-FU5	FUSIBILE PROTEZIONE 230VAC 230VAC PROTECTION FUSE SICHERUNGEN 230VAC FUSIBLES PROTECTION 230VAC FUSIBLES PROTECCION 230VAC	4521828	3NW8003-1	SIEMENS	/2.E3	B
C	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	C
D	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	D
E	-FU10	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521837	3NW8220-1	SIEMENS	/2.B1	E
F	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	F
G	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	G
H	-FU11/A	FUSIBILI PROTEZIONE RESISTENZE EH11/A EH11/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH11/A FUSIBLES DE PROTECTION RESISTANCES EH11/A FUSIBLES DE PROTECTION EH11/A	4521849	3NC2 280	SIEMENS	/1.C4	H
I	-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5	I
J	-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5	J
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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B	
-FU12/A	FUSIBILI PROTEZIONE RESISTENZE EH12/A EH12/A HEATERS PROTECTION FUSES SICHERUNG HEIZUNG EH12/A FUSIBLES DE PROTECTION RESISTANCES EH12/A FUSIBLES DE PROTECTION EH12/A	4521849	3NC2 280	SIEMENS	/1.C5		B	
-GS1	ALIMENTATORE 24VDC POWER SUPPLY FOR 24VDC STROMVERSORGUNG 24VDC ALIMENTATEUR POUR 24VDC ALIMENTADOR POR 24VDC	4532294	6EP1332-2BA10	SIEMENS	/2.D6			
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570632	8WD44500FA 230V	SIEMENS	/6.D3		C	
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570236	BA15D 240V	SIEMENS	/6.D3			
-HA1	SIRENA-LAMPADA ALLARME (OPTIONAL) ALARM HORN-LAMP (OPTIONAL) ALARME SIRENE-LAMPE (OPTIONAL) SIRENE-LAMPE DE ALARME (OPTIONAL) SIRENA-LAMPADA DE ALARME (OPCIONAL)	4570236	BA15D 240V	STANDARD	/6.D3		D	
-KA0	RELE' CONTROLLO FASE RELAY-PHASE CONTROL RELAIS PHASENFOLGE RELAIS DE CONTROLE PHASE RELE CONTROL DE FASE	4513477	RM 84873 299	TELEMECANIQUE	/2.D3		D	
-KA1	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F2		E	
-KA2	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F4		E	
-KA3	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/10.E5		F	
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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A
	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	
B	-KA4	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/10.E6	B
	-KA6	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E5	
C	-KA7	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E7	C
	-KA8	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E8	
D	-KA9	RELE' STATICO STATIC RELAY STATISCHES RELAIS RELAIS STATIQUE RELE ESTATICO	4513484	38.81.7.024.9024	FINDER	/5.C2	D
	-KA10	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E2	
E	-KA11	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E3	E
	-KA12	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/11.E2	
F	-KA010	RELE' AUSILIARIO AUXILIARY RELAY HILFSRELAIS RELAIS AUXILIAIRE RELE AUXILIAR	4513493	38.51.0.240.0060	FINDER	/7.F5	F
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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	
B	SIGLA SIGLA	DESCRIPCION DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF. REF.	
-KM1		CONTATTORI SOFFIANTE M1 M1 BLOWER CONTACTOR KONTAKTSCHALTER GEBLAEMOTOR M1 CONTACTEUR DU SOUFFLANTE M1 CONTACTOR SOPLADOR M1	4512377	3RW3036-1AB14	SIEMENS	/6.D2	
-KM6		CONTATTORI RESIST. RIGENERAZIONE SX LH REGENERATION HEATER CONTACTOR KONTAKTSCHALTER HEIZELEMENT REGENERIERUNG LINKE CONTACTEUR DES RESISTANCES DE REGENERATION SX CONTACTOR RESISTENCIA REGENERACION SX	4512304	3RT1025-1AL20	SIEMENS	/5.E6	
-KM7		CONTATTORI RESIST. RIGENERAZIONE DX RH REGENERATION HEATER CONTACTOR KONTAKTSCHALTER HEIZELEMENT REGENERIERUNG RECHTER CONTACTEUR DES RESISTANCES DE REGENERATION DX CONTACTOR RESISTENCIA REGENERACION DX	4512304	3RT1025-1AL20	SIEMENS	/5.E7	
-KM8		CONTATTORI SOFFIANTE M8 M8 BLOWER CONTACTOR KONTAKTSCHALTER GEBLAEMOTOR M8 CONTACTEUR DU SOUFFLANTE M8 CONTACTOR SOPLADOR M8	4512302	3RT1016-1AP01	SIEMENS	/5.E8	
-KM11/A		CONTATTORI SICUREZZA RESISTENZE EH11/A EH11/A HEATERS SAFETY CONTACTOR SICHERHEITS KONTAKTSCHALTER HEIZUNG EH11/A CONTACTEUR SECURITE RESISTANCES EH11/A CONTACTOR SEGURIDAD RESISTENCIAS EH11/A	4512306	3RT1034-1AL20	SIEMENS	/5.E4	
-KM12/A		CONTATTORI SICUREZZA RESISTENZE EH12/A EH12/A HEATERS SAFETY CONTACTOR SICHERHEITS KONTAKTSCHALTER HEIZUNG EH12/A CONTACTEUR SECURITE RESISTANCES EH12/A CONTACTOR SEGURIDAD RESISTENCIAS EH12/A	4512306	3RT1034-1AL20	SIEMENS	/5.E5	
-KM81/A		CONTATTORI COMANDO RESISTENZE EH11/A EH11/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH11/A CONTACTEUR RESISTANCES EH11/A CONTACTOR COMANDO RESISTENCIAS EH11/A	4701637	3RF2190-1AA04	SIEMENS	/5.F2	
-KM81/A		CONTATTORI COMANDO RESISTENZE EH11/A EH11/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH11/A CONTACTEUR RESISTANCES EH11/A CONTACTOR COMANDO RESISTENCIAS EH11/A	4701637	3RF2190-1AA04	SIEMENS	/5.E2	
-KM82/A		CONTATTORI COMANDO RESISTENZE EH12/A EH12/A HEATERS CONTROL CONTACTOR KONTAKTSCHALTER PROZESSHEIZUNG EH12/A CONTACTEUR RESISTANCES EH12/A CONTACTOR COMANDO RESISTENCIAS EH12/A	4701637	3RF2190-1AA04	SIEMENS	/5.E3	

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A	SIGLA POS. SIGEL POS./PIECE	DESCRIZIONE DESCRIPTION BESCHREIBUNG DESCRIPTION MODELE/COMPOSANT	CODICE CODE CODE CODE/PIECE DE RECHANGE	MODELLO TYPE TYPE TYPE	COSTRUTTORE MANUFACTURER HERSTELLER MANUFACTURER	RIF. REF. BEZUG REF.	A
B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-KM82/A		CONTATTORE COMANDO RESISTENZE EH12/A EH12/A HEATERS CONTROL CONTACTOR KONTAKSCHALTER PROZESSHEIZUNG EH12/A CONTACTEUR RESISTANCES EH12/A CONTACTOR COMANDO RESISTENCIAS EH12/A	4701637	3RF2190-1AA04	SIEMENS	/5.F3	B
-M1		MOTORE SOFFIANTE PROCESSO PROCESS BLOWER MOTOR PROZESSGEBLAEMOTOR MOTEUR SOUFFLANTE PROCESSUS MOTOR SOPLADOR DE PROCESO	(*)1		STANDARD	/1.E2	C
-M8		MOTORE SOFFIANTE RIGENERAZIONE REGENERATION BLOWER MOTOR REGENERIERUNGS GEGLAESE MOTOR MOTEUR SOUFFLANTE REGENERATION MOTOR SOPLADOR DE REGENERACION	(*)1		STANDARD	/1.E3	C
-QM1		MAGNETOTERMICO PROT. MOTORE M1 M1 MOTOR SAFETY CUTOUT THERMOSCHUETZ MOTOR M1 MAGNETOTHERMIQUE DE PROTECTION DU MOTEUR M1 MAGNETOTERMICO PROTECCION MOTOR M1	4514559	3RV1031-4FA10	SIEMENS	/1.C2	D
-QM8		MAGNETOTERMICO PROT. MOTORE M8 M8 MOTOR SAFETY CUTOUT THERMOSCHUETZ MOTOR M8 MAGNETOTHERMIQUE DE PROTECTION DU MOTEUR M8 MAGNETOTERMICO PROTECCION MOTOR M8	4514550	3RV1011-1FA10	SIEMENS	/1.C3	D
-QS1		INTERRUTTORE GENERALE MAIN SWITCH HAUPTSCHALTER INTERRUPTEUR GENERAL INTERRUPTOR GENERAL	4514897	3KA7123-3AA00	SIEMENS	/1.B2	E
-R1		RESISTENZA HEATER HEIZUNG RESISTANCE RESISTENCIA	4700102	500Ω 1/2W 1%	STANDARD	/3.C8	E
-R2		RESISTENZA HEATER HEIZUNG RESISTANCE RESISTENCIA	4700102	500Ω 1/2W 1%	STANDARD	/8.C8	F
-SP1		PRESSOSTATO ARIA COMPRESSA COMPRESSED AIR PRESSURE SWITCH DRUCKWACHTER DRUCKLUFT PRESSOSTAT DE L'AIR COMPRIME PRESOSTATO AIRE COMPRIMIDO	(*)1		STANDARD	/4.D5	F

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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	
-SP2	PRESSOSTATO DIFFERENZIALE INTASAMENTO FILTRI DIFF. PRESSURE SWITCH-FILTERS CLOGGED DIFFERENTIAL DRUCKWACHTER FILTERVERSTOPFUNG PRESSOSTAT DIFERNETIEL DE L'ENCRASSEMENT DES FILTRES PRESOSTATO DIFERENCIAL ATASCAMIENTO FILTROS	(*)			STANDARD	/4.D6	
-SP2/1	PRESSOSTATO INTASAMENTO FILTRI (OPTIONAL) DIFF. PRESSURE SWITCH-FILTERS CLOGGED (OPTIONAL) DIFFERENTIAL DRUCKWACHTER FILTERVERSTOPFUNG (OPTIONAL) PRESSOSTAT DIFERNETIEL DE L'ENCRASSEMENT DES FILTRES (OPTIONAL) PRESOSTATO DIFERENCIAL ATASCAMIENTO FILTROS (OPCIONAL)	(*)			STANDARD	/4.B6	
-SQ1	MICRO PORTA FILTRI APERTA AIR FILTERS OPEN GATE FILTERTUER GEOEFFNET MICRO INT. PORTE FILTRE OUVERTE MICRO PUERTA FILTROS ABIERTA	(*)			STANDARD	/9.D2	
-ST1/A	TERMOSTATO DI SICUREZZA SSR SAFETY THERMOSTAT SSR SICHERHEITSTHERMOSTAT SSR THERMOSTAT DE SECURITE SSR TERMOSTATO DE SEGURIDAD SSR	4152078	339-308		RS	/9.D3	
-ST15/A	TERMOSTATO SOVRATEMP. CAMERA RISCALD. A OVERTEMP. THERMOSTAT-PROCESS HEATER CHAMBER A UBERTEMPEARTUR THERMOSTAT HEIZKAMMER A THERMOSTAT DE SURTEMP. CHAMBRE RECHAUFFAGE A TERMOSTATO SOBRE TEMP. CAMARA CALENTAMIENTO A	(*)			STANDARD	/4.D4	
-ST16	TERMOSTATO SOVRATEMP. CAMERA RIGEN. SX LEFT REGENERATION HEATERS CHAMBER OVERTEMP. SWITCH UBERTEMPEARTUR THERMOSTAT REGENERIERUNGSHEITSKAMMER LINKS THERMOSTAT DE SURTEMP. CHAMBRE REGENERATION SX TERMOSTATO SOBRE TEMP. CAMARA REGENERACION SX	(*)			STANDARD	/4.D3	
-ST17	TERMOSTATO SOVRATEMP. CAMERA RIGEN. DX RIGHT REGENERATION HEATERS CHAMBER OVERTEMP. SWITCH UBERTEMPEARTUR THERMOSTAT REGENERIERUNGSHEITSKAMMER RECHTS THERMOSTAT DE SURTEMP. CHAMBRE REGENERATION DX TERMOSTATO SOBRE TEMP. CAMARA REGENERACION DX	(*)			STANDARD	/4.D4	
-STD1	DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL)	4151533	DMT242A		VAISALA	/3.E7	
-STD1	DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL) DEW-POINT (OPTIONAL)	4151530	EAS-TX-80		MICHELL	/3.D7	

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B	SIGLA SIGLA	DESCRIPCION DESCRICAO	CODIGO CODIGO	MODELO TIPO	CONSTRUCTOR FABRICANTE	REF. REF.	B
-TC1		TRASFORMATORE TRANSFORMER TRANSFORMATOR TRANSFORMATEUR TRANSFORMADOR	4511505	700VA -15/0/15/230/400/460/480 S1=0/230 S2=0/230	C.E.	/2.D2	B
-YV1		ELETROVALVOLA CAMBIO TORRE TOWER-CHANGE SOLENOID VALVE COIL ELEKTROVENTILSPULE TURMWECHSEL ELECTROVANNE DE CHANGE DES TOURS ELECTROVALVULA CAMBIO TORRE	(*)		STANDARD	/7.D8	C
-YV3		ELETTROV. CORTO CIRCUITO ARIA RIGEN. (OPT.) REGENERATION AIR SHORT CIRCUIT SOLENOID VALVE (OPTIONAL) ELEKROVENTILSPULE - KURZSCHLUSS R.-LUFT (OPTIONAL) ELECTROVANNE DU CORT-CIRCUIT(OPTIONAL)	(*)		STANDARD	/7.D7	C
-YV6		ELETROVALVOLA CORTOCIRCUITO AIRE REGENERACION (OPCIONAL) ELETTROVALVOLA RAFFREDDAMENTO RIGENERAZIONE (H2O) REGENERATION COOLING SOLENOID VALVE (H2O) ELEKTROVENTILSPULE REGENERIERUNGS ABKHLUNG (H2O) ELECTROVANNE DE REFROIDISSEMENT REGENERATION (H2O)	(*)		STANDARD	/7.D6	D
-YV8		ELETROVALVOLA REGOLAZIONE ARIA AIR REGULATION SOLENOID VALVE ELEKTROVENTILSPULE REGELUNG LUFT ELECTROVANNE REGLAGE AIR ELECTROVALVULA REGULACION AIRE	(*)	STANDARD	/3.D8	D
-YV9		ELETROVALVOLA RAFFREDDAMENTO (H2O) COOLING SOLENOID VALVE (H2O) ELEKTROVENTILSPULE ABKHLUNG (H2O) ELECTROVANNE DE REFROIDISSEMENT (H2O) ELECTROVALVULA ENFRIMIENTO (H2O)	(*)	STANDARD	/8.D8	E
NOTA : (*)	CODICI PARTI RICAMBIO DA RICERCARE NELLA SEZIONE MECCANICA DEL MANUALE. SPARE PART CODES TO BE FOUND IN THE MECHANICAL SECTION OF THE MANUAL. DIE ERSATZTEILNUMMERN SIND IM MECHANISCHEN TEIL DES HANDBUCHES ENTHALTEN. CODE DE LA PIECE DE RECHANGE A RECHERCHER DANS LA PARTIE MECANIQUE DE CE LIVRET D'INSTRUCTION. LOS CODIGOS PIEZAS DE REPUESTO TIENEN QUE BUSCARSE EN LA SECCION MECANICA DEL MANUAL. OS CODIGOS DAS PEÇAS SOBRESALENTEIS DEVEM SER PROCURADOS NA SECAO MECANICA DO MANUAL.						
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