



SMARTY XP

EN MOUNTING AND INSTALLATION INSTRUCTION

 **SALDA**

www.salda.it

1. CONTENT

2.SYMBOLS AND MARKING	3
3.SAFETY INSTRUCTIONS AND PRECAUTIONS	4
4. INFORMATION ABOUT THE PRODUCT	5
4.1. DESCRIPTION	5
4.2. DIMENSIONS AND WEIGHT	5
4.3. TECHNICAL DATA	6
4.4. OPERATING CONDITIONS	7
4.5. STANDART PACKAGE OF COMPONENTS	7
4.6. DESCRIPTION OF COMPONENTS	7
5. INSTALATION	8
5.1. RECEPTION OF GOODS	8
5.2. TRANSPORTATION AND STORAGE	8
5.3. UNPACKING	8
5.4.PIPING AND INSTRUMENTATION DIAGRAM	9
5.5. MOUNTING	10
5.6.UNIT PLACING AND MOUNTING POSITIONING REQUIREMENTS	10
5.7. CEILING-MOUNTING OF THE UNIT	11
5.8. CONNECTION OF THE AIR DUCT	11
5.9.CONNECTION OF THE UNIT TO ELECTRIC NETWORK	12
5.10. START-UP RECOMMENDATIONS	12
5.10.1. SYSTEM PROTECTION	12
5.10.2.PRE-STARTUP RECOMENDATIONS OF THE UNIT (IN THE PRESENCE OF THE ENDUSER)	12
6. MAINTENANCE	13
6.1. SAFETY INSTRUCTION	13
6.2.GENERAL RECOMMENDATIONS FOR THE MAINTENANCE OF VENTILATION SYSTEM	13
6.3. COVER OPENING	13
6.4. FILTERS MAINTENANCE	14
6.5. HEAT EXCHANGER MAINTENANCE	14
6.6. FAN MAINTENANCE	15
6.7. BYPASS DAMPERS MAINTENANCE	16
6.8. CONTROL BOARD MAINTENANCE	17
7. CONTROL	18
7.1. DEVICE CONTROL	18
7.2. DEVICE FUNCTIONS	18
8. ACCESSORIES	19
8.1. CONNECTION OF ACCESSORIES	20
8.1.1. HEATER AND PRE-HEATER	20
8.1.2.FIRE PROTECTION SIGNAL INPUT (FIRE PROTECTION INPUT (NC))	27
8.1.3.EXTERNAL CO ₂ /RH SENSORS	27
8.1.4.ROOM CO ₂ TRANSMITTER INSTALLATION RECOMMENDATION	28
8.1.5.CO ₂ CONCENTRATION ACCORDING TO PETTENKOFER LIMIT	28
8.1.6.CONECTION OF SUPPLY AND EXHAUST AIR DAMPERS	28
8.1.7.CONNECTION OF REMOTE CONTROL PANEL OR MODBUS	29
8.1.8.FIRE PLACE CONNECTION (SMARTY XP 1.1)	29
8.1.9.RECOMMENDED SCHEME FOR CONNECTION OF INTERNAL AND EXTERNAL COMPONENTS	30
9.POSSIBLE FAULTS AND TROUBLESHOOTING	35
10.ECODESIGN DATA TABLE	36
11.DECLARATION OF CONFIMITY	40
12. WARRANTY	41
12.1. LIMITED WARRANTY COUPON	41

2. SYMBOLS AND MARKING

 **Warning – pay attention**

 **Additional information**

Apply the auxiliary label on the unit (on an easily accessible location) or on the dashed location of the technical manual in order to keep the important information about the unit.

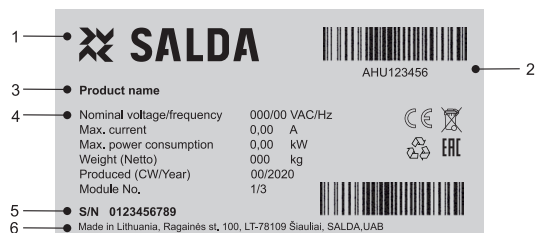


Figure 2.1. Technical label

1 - Logo; 2 - Product code (SKU); 3 - Product name; 4 - Technical data; 5 - Serial number; 6 - Production place.



Figure 2.2. Indication for duct connection.

ODA - outdoor air; SUP - supply air; ETA - extract air; EHA - exhaust air.

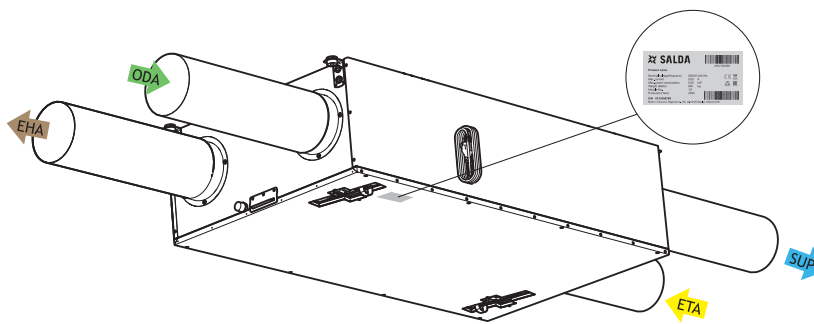



Figure 2.3. Technical label location and air duct indication

 **NOTE. Ducts are not the part of the unit.**

3. SAFETY INSTRUCTIONS AND PRECAUTIONS

Read these instructions very carefully before installing and using this equipment. Installation, connection and maintenance should be carried out by a qualified technician and in accordance with the local regulations and legislation.

The company shall take no responsibility for the injuries or damaged property if the safety requirements are not followed or the device is modified without the permission of the manufacturer.

Main safety rules

Danger

- Before carrying out any electrical or maintenance works, make sure that the device is disconnected from the mains and all moving parts of the device have stopped.
- Make sure that the fans are not accessible through air ducts or branch openings.
- If any liquids on electric parts or connections that bear voltage are noticed, stop the operation of the device.
- Do not plug the device into the mains that differ from the one indicated on the label or on the housing.
- Voltage of the mains should comply with the electro technical parameters indicated on the label.
- The device should be earthed in accordance with the regulations on the installation of electric devices. Turning on and using unearthed device is not allowed. Follow the requirements specified on the device's labels that indicate danger.



Warnings

- Connection of electricity and maintenance of the device should be performed by the qualified personnel only and in accordance with the manufacturer's instructions and safety requirements.
- In order to reduce the risk during installation and maintenance, suitable protective clothing must be worn.
- Beware of sharp angles while carrying out installation and maintenance works.
- Do not touch heating elements until they haven't cooled down.
- Some devices are heavy, you should be very careful while transporting and installing them. Use suitable lifting equipment.
- When connecting electricity to the mains, a circuit breaker of suitable size must be used.



Warning!

- If the device is installed in a cold environment, make sure that all connections and tubes are properly isolated. Intake and discharge air ducts should be isolated in all cases.
- Openings of the ducts should be covered during transportation and installation.
- Make sure not to damage the heater when connecting the piping of the water heater. For tightening up, use a wrench/spanner.



Before starting up the device

- make sure, that there are no strange objects inside;
- manually check fans to make sure they are not stuck or blocked;
- if rotary heat exchanger is installed in the device, make sure that it is not stuck or blocked;
- check the earthing;
- make sure that all components and accessories are connected in accordance with the wiring diagram or provided instructions.



Danger: Fumes

- *Salda Antifrost* system uses dis-balancing of an airflow and it may cause negative pressure in premises. Care must be taken when using the device in the premises together with another heating appliance that depends on the air in the premises. Such appliances include gas, oil, wood or coal-fired boilers and heaters, fireplaces, continuous flow or other water heaters, gas hobs, cookers or ovens that draw the air in from the room and the duct-exhaust gases out through chimney or extraction ducting. The heating appliance can be starved of oxygen, impairing combustion. In exceptional cases, harmful gases could be drawn out of the chimney or extraction ducting back into the room. In such case we strictly recommend to turn off *Salda Antifrost* and use an external preheater for heat exchanger anti-frost protection (see *Salda Antifrost* function in the Remote Controller Operation Manual).



4. INFORMATION ABOUT THE PRODUCT

4.1. DESCRIPTION

Smarty XP is the residential air handling unit with a high efficiency (up to 90%) counter flow heat exchanger. The unit supplies ventilation in home and takes the heat from exhaust air. AHU complies with ErP 2018 and Passivhaus requirements. The unit is operated by a separate remote control panel or through separate MB-Gateway by PC. Remote control panel and MB-Gateway are optional and not included in the standard package. Control functions depend on selected control board type: MiniMCB or MiniMCB basic.

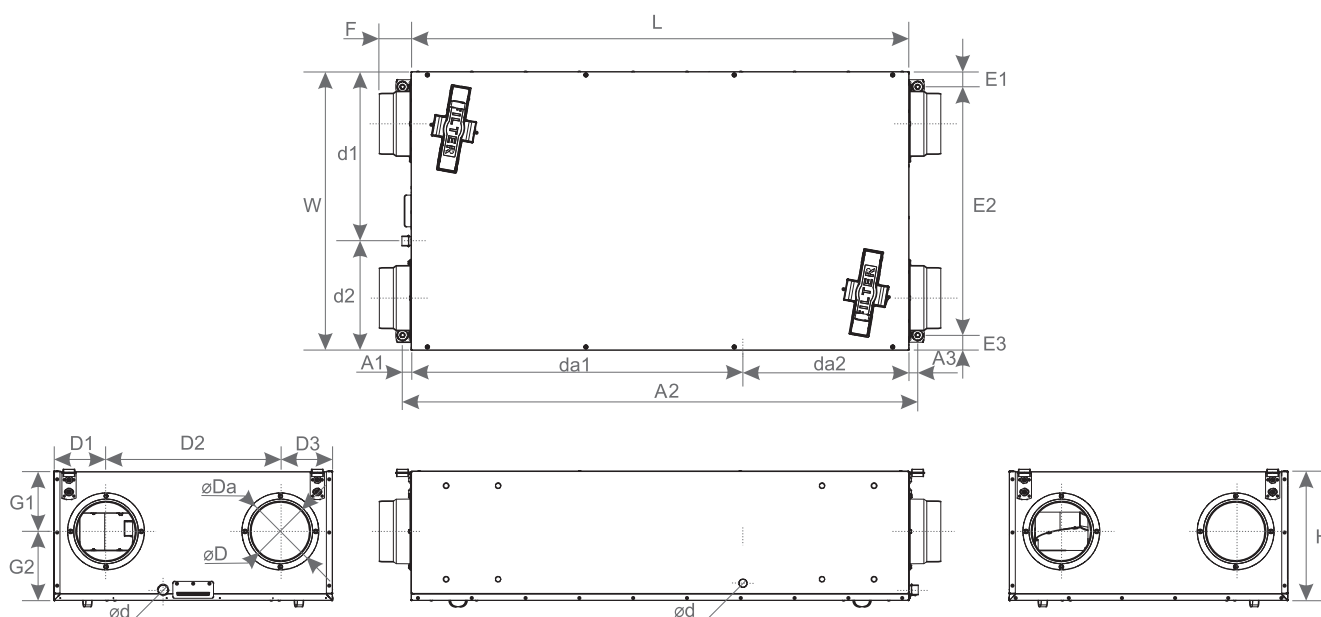
Product name	Control board	Type	Heat recovery	Temperature control	Bypass damper	Optional heating elements	
						Duct based Air Pre-Heater	Duct based Air Heater
Smarty 2X P 1.1	Mini MCB	Premium	+	+	+	+	+
Smarty 2X P 1.2	Mini MCB Basic	Advanced	+	+	+	+*	+*
Smarty 3X P 1.1	Mini MCB	Premium	+	+	+	+	+
Smarty 3X P 1.2	Mini MCB Basic	Advanced	+	+	+	+*	+*
Smarty 4X P F2 1.1	Mini MCB	Premium	+	+	+	+	+
Smarty 4X P F2 1.2	Mini MCB Basic	Advanced	+	+	+	+*	+*

*- only pre-heater or heater



Not suitable for operation in pools, saunas and other similar premises.

4.2. DIMENSIONS AND WEIGHT



SMARTY		2XP 1.1	2XP 1.2	3XP 1.1	3XP 1.2	4XP F2 1.1	4XP F2 1.2
L	[mm]	1010	1010	1228	1228	1228	1228
W	[mm]	590	590	690	690	690	690
H	[mm]	250	250	324	324	324	324
øD	[mm]	125	125	160	160	160	160
øDa	[mm]	160	160	150	150	150	150
F	[mm]	39	39	48	48	48	48
ød		G1/2	G1/2	G1/2	G1/2	G1/2	G1/2
øda		G3/8	G3/8	G3/8	G3/8	G3/8	G3/8
A1	[mm]	21	21	21	21	21	21
A2	[mm]	1047	1047	1268	1268	1268	1268
A3	[mm]	21	21	21	21	21	21
E1	[mm]	29	29	37	37	37	37
E2	[mm]	532	532	611	611	611	611
E3	[mm]	29	29	37	37	37	37
d1	[mm]	379	379	408	408	408	408
d2	[mm]	211	211	271	271	271	271
da1	[mm]	326	326	409	409	409	409
da2	[mm]	684	684	817	817	817	817
D1	[mm]	115	115	128	128	128	128
D2	[mm]	360	360	429	429	429	429
D3	[mm]	115	115	128	128	128	128
G1	[mm]	113	113	148	148	148	148
G2	[mm]	136	136	170	170	170	170
Weight	[kg]	40	40	53	53	53	53

4.3. TECHNICAL DATA

SMARTY		2XP 1.1	2XP 1.2	3XP 1.1	3XP 1.2	4XP F2 1.1	4XP F2 1.2
Exhaust air fan							
phase/voltage	[50 Hz/VAC]	1/230	1/230	1/230	1/230	1/230	1/230
power/current	[kW/A]	0,05/0,4	0,05/0,4	0,09/0,75	0,09/0,75	0,17/1,35	0,17/1,35
speed	[min ⁻¹]	4525	4525	3200	3200	4120	4120
control input	[VDC]	0-10	0-10	0-10	0-10	0-10	0-10
protection class		IP 44	IP 44	IP 54	IP 54	IP54	IP54
Supply air fan							
phase/voltage	[50 Hz/VAC]	1/230	1/230	1/230	1/230	1/230	1/230
power/current	[kW/A]	0,05/0,4	0,05/0,4	0,09/0,75	0,09/0,75	0,17/1,35	0,17/1,35
speed	[min ⁻¹]	4525	4525	3200	3200	4120	4120
control input	[VDC]	0-10	0-10	0-10	0-10	0-10	0-10
protection class		IP 44	IP 44	IP 54	IP 54	IP54	IP54
Total power/current consumption	[kW/A]	0,10/0,85	0,10/0,85	0,17/1,55	0,17/1,55	0,34/2,7	0,34/2,7
Automatic control integrated		miniMCB	miniMCB basic	miniMCB	miniMCB basic	miniMCB	miniMCB basic
Insulation of walls	[mm]	20	20	30	30	30	30
Exhaust air filter (class, dimensions LxWxH)	[mm]	MPL 185x168x25 Coarse 65%		MPL 225x195x25 Coarse 65%		MPL 225x195x25 Coarse 65%	
Supply air filter (class, dimensions LxWxH)	[mm]	MPL 185x168x25 Coarse 65%		MPL 225x195x25 Coarse 65%		MPL 225x195x25 Coarse 65%	
Device protection class		IP 34	IP 34	IP 34	IP 34	IP-34	IP-34

According to EN 13141-7.

Acoustic data: check the product page on www.salda.it



Not suitable for installation in living rooms: additional noise insulation required.

4.4. OPERATING CONDITIONS

SMARTY	2X P	3X P	4X P F2
Minimum outdoor air temperature	-2 °C	-2 °C	-2 °C
Maximum outdoor air temperature	+40 °C	+40 °C	+40 °C
Minimum extracted air temperature	+15 °C	+15 °C	+15 °C
Maximum extracted air temperature	+40 °C	+40 °C	+40 °C
Maximum extracted air relative humidity	60 %	60 %	60 %
Minimum ambient air temperature	+5 °C	+5 °C	+5 °C
Maximum ambient air temperature	+40 °C	+40 °C	+40 °C
Instillation	indoor	indoor	indoor

4.5. STANDART PACKAGE OF COMPONENTS

SMARTY	2XP 1.1	2XP 1.2	3XP 1.1	3XP 1.2	4XP F2 1.1	4XP F2 1.2
Key M4 Z-type	1	1	1	1	1	1
Outlet pipe G3/8	1	1	1	1	1	1
Anti-vibration rubber 313508000	4	4	4	4	4	4
BFG bush caps	8	8	8	8	8	8

4.6. DESCRIPTION OF COMPONENTS

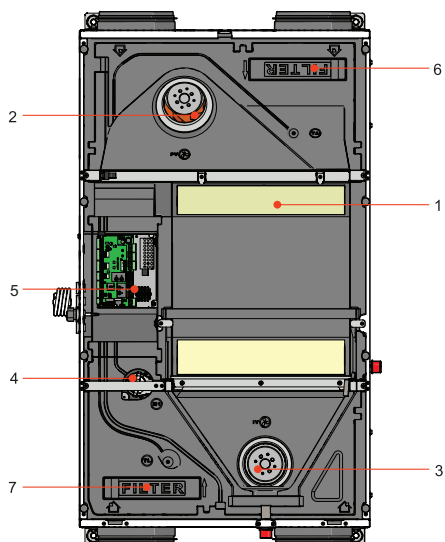


Figure 4.6.1. SmartY 2 XP construction

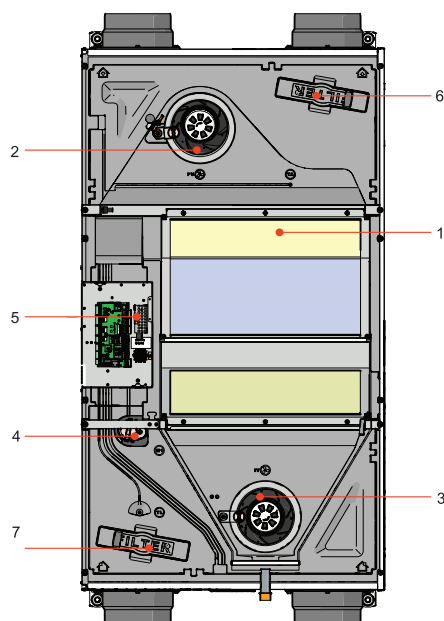


Figure 4.6.2. SmartY 3 XP, SmartY 4XP F2 construction

1 - Plate heat exchanger; 2 - Supply fan; 3 - Exhaust fan; 4 - By-pass damper; 5 - Control board; 6 - Extract air filters (panel); 7 - Supply air filter (panel).

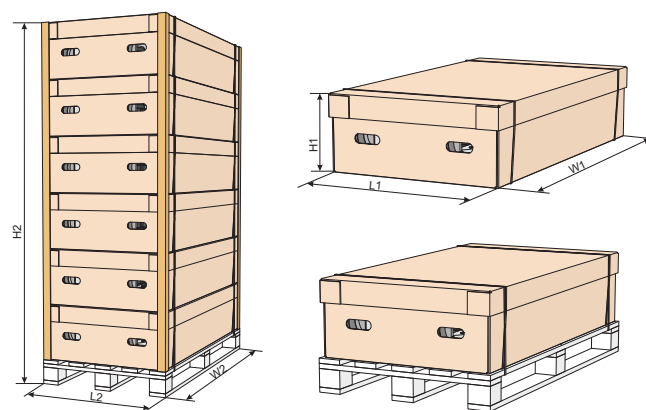
5. INSTALATION

5.1. RECEPTION OF GOODS

Each device is carefully checked before transportation. When receiving the goods, checking the devices for any damage made during transportation is recommended. If any damage to the unit is observed, immediately contact the representatives of a transport company. Please inform the representative of the manufacturer, if any deviation of the device is noticed.

5.2. TRANSPORTATION AND STORAGE

- All units are factory-packaged to withstand normal conditions of transportation.
- When unpacking, check the unit for any damage made during transportation. Installing of damaged units is not allowed!
- **The packaging is used for protection purpose only!**
- When unloading and storing the units, use suitable lifting equipment to avoid damage and injuries. Do not lift units by holding on power supply cables, connection boxes, air extract or exhaust flanges. Avoid hits and shock overloads. Before installation, the units must be stored in a dry room with the relative air humidity not exceeding 70% (at +20°C) and with an average ambient temperature ranging between +5 °C and +30 °C. The storage place must be protected against dirt and water.
- The units must be transported to the storage place or installation site using forklifts.
- The recommended storage period should not be longer than one year. In case of storing the units for a period longer than one year, checking if the fan bearings and motor rotate without difficulty (turning the impeller by hand) and if the electric circuit insulation is not damaged or the moisture has not accumulated must be performed before the installation of the unit.



Unit	Dimensions of a single package			Dimensions of multi-package			Max. number of transported packages
	H1 [mm]	L1 [mm]	W1 [mm]	H2 [mm]	L2 [mm]	W2 [mm]	[pcs.]
Smarty 2X P	260	680	1120	2240	800	1200	8
Smarty 3X P	325	780	1400	2175	800	1450	6
Smarty 4X P F2	325	780	1400	2175	800	1450	6

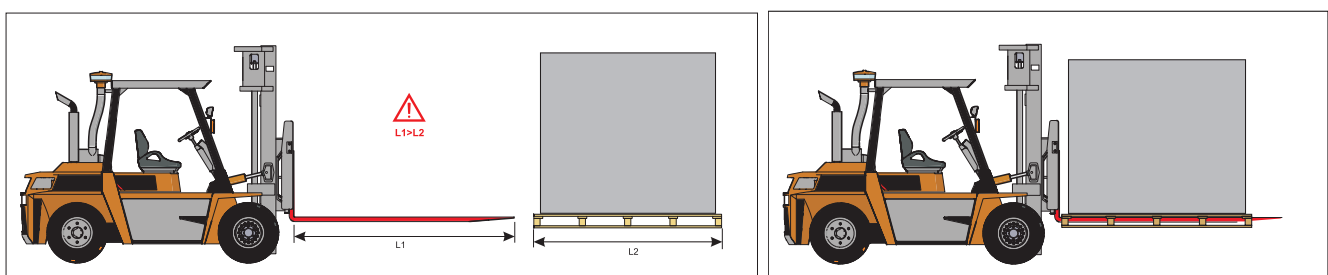


Figure 5.2.1. Lifting by forklift.



In order to prevent damage to the casing, only a product placed on a pallet should be lifted.

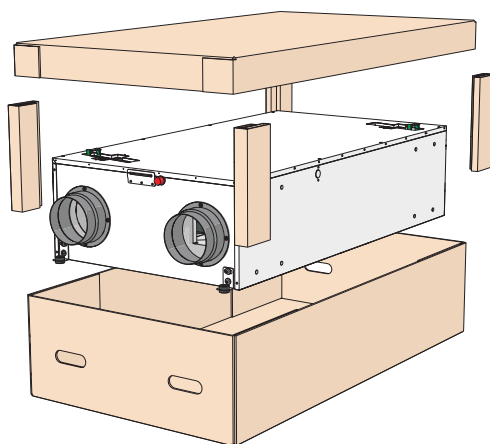
5.3. UNPACKING



Accessories may be packed together with the product. Prior to transporting the unit, the accessories should be unpacked first.

- Remove the film from the unit.
- Remove the bracing packaging tape that keeps the protective profiles in place.
- Remove the protective profiles.
- After unpacking the unit, examine it to make sure that no damage was made during transportation. Installing of damaged units is not allowed!

• Before commencing the installation of the unit, please check if all ordered equipment have been delivered. Any variation from the ordered equipment list must be reported to the product supplier.



5.4. PIPING AND INSTRUMENTATION DIAGRAM

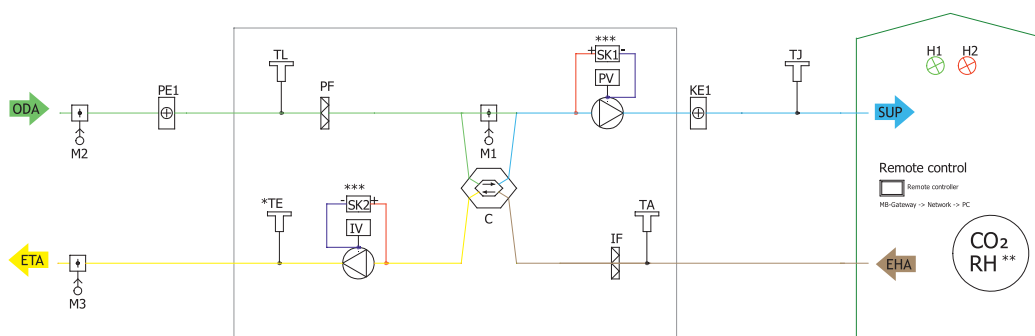


Figure 5.4.1. Smarty XP 1.1 (*Exhaust air sensor is not included with a device and should be ordered as an accessory; ** Check the manual for details; *** Not available in Smarty 2 XP V1.1 units)

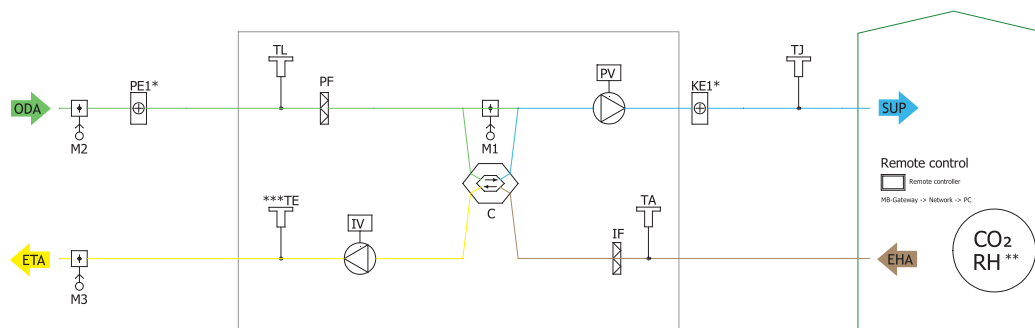


Figure 5.4.2. Smarty XP 1.2 (* Only heater or preheater can be connected at a time; ** Check the manual for details; *** Exhaust air sensor is not included with a device and should be ordered as an accessory)

THE LIST OF COMPONENTS

C	Plate heat exchanger	PV	Supply air fan
IF	Extract air filter	PF	Supply air filter
IV	Exhaust fan	TA	Extract air temperature sensor
TE	Exhaust air temperature sensor	TJ	Supply air temperature sensor
DTJ	Extract air temperature and humidity sensor	CO₂	CO ₂ sensor
RH	RH sensor	PC	Computer
KE1	Electric heater	PE1	Electric pre-heater
M1	By-pass damper	M2	Outdoor air damper actuator
M3	Exhaust air damper actuator	SK1	Supply air pressure sensor
SK2	Exhaust air pressure sensor	TL	Outdoor air temperature sensor
	Ventilated premises	MB-Gateway	Network module
NET	Network	RC	Stouch or ST-SA-Control remote control panel

POSSIBLE PCB INPUTS/OUTPUTS

FA	Fire alarm	FPP	Fireplace protection
H1	Working indication output	H2	Alarm indication output
	System mode switch (START/STOP)		Fans speed switch (BOOST)

5.5. MOUNTING

- Installation should be carried out by qualified and trained staff only.
- When connecting air ducts, consider the labels on the casing of the unit.
- Before connecting to the air duct system, the connection openings of ventilation unit should be closed.
- When connecting the ducts, the air-flow direction indicated on the device housing should be observed.
- Do not connect the bends close to connection flanges of the unit. The minimum distance of the straight air duct between the unit and the first branch of the air duct in the supply air duct must be 1xD, in air exhaust duct 3xD, where D is the diameter of the air duct.
- It is recommended to use the brackets (accessories). This will reduce the vibration transmitted by the unit to the air duct system and environment.
- Sufficient space must be provided for opening of the manhole and filter covers.
- If the ventilation unit is wall-mounted wall, it may transmit noise vibrations to the premises. Though the level of noise generated by the fans is admissible, mounting the unit at the distance of 400 mm from the nearest wall is recommended. Where this is not possible, mounting of the unit on the wall of the room where the level of noise is not significant is recommended.
- Ducts are connected to the unit in such way that they could be easily disassembled and the heater could be removed from the unit when carrying out maintenance, servicing and/or repairs

⚠ The protective film is used to protect the unit during transportation. It is recommended to remove the film; otherwise, oxidation signs may occur.

⚠ Before every heating season, the condensate tube must be filled with water as indicated during the first start-up!

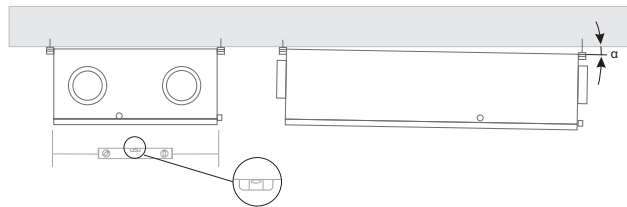


Figure 5.5.1. Ceiling-mounting positions ($\alpha > 1^\circ$)

5.6. UNIT PLACING AND MOUNTING POSITIONING REQUIREMENTS

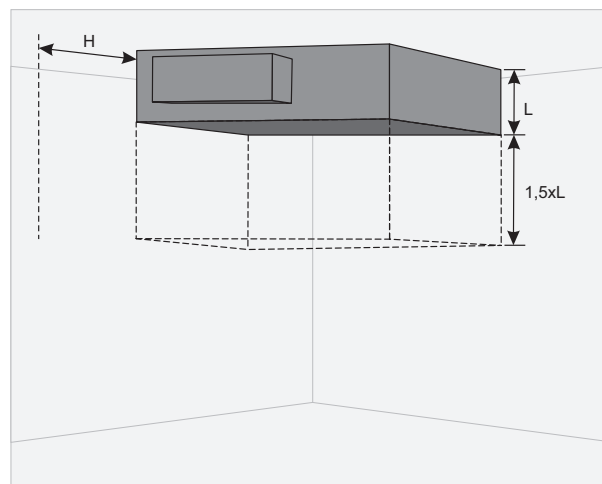


Figure 5.6.1. Min. distance to open the door - $1,5xL$; Min. distance to open the control box door - $H > 400$ mm.

5.7. CEILING-MOUNTING OF THE UNIT

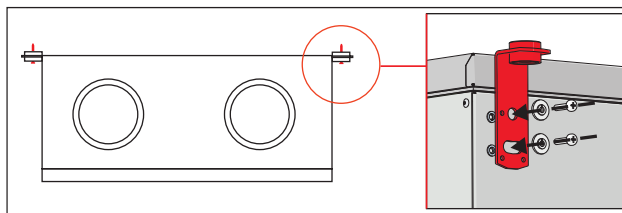


Figure 5.7.1. Ceiling-mounting of the unit

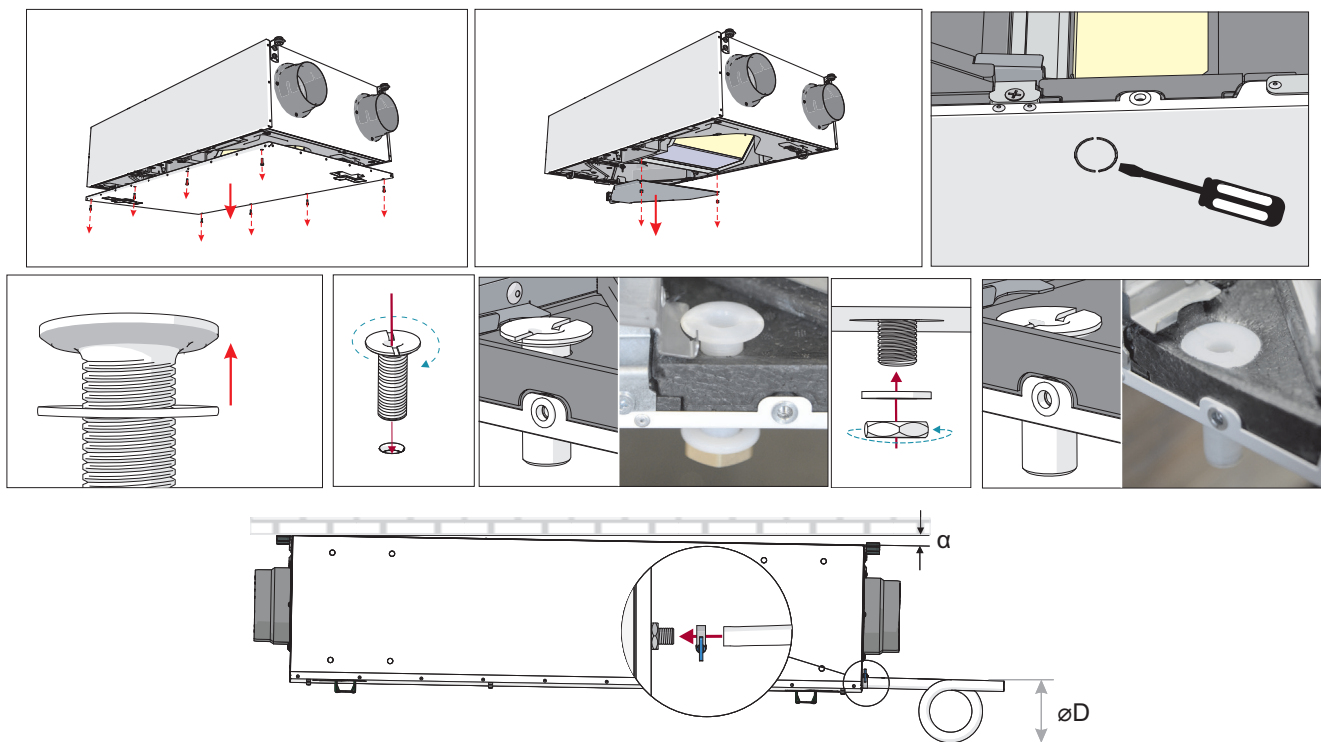
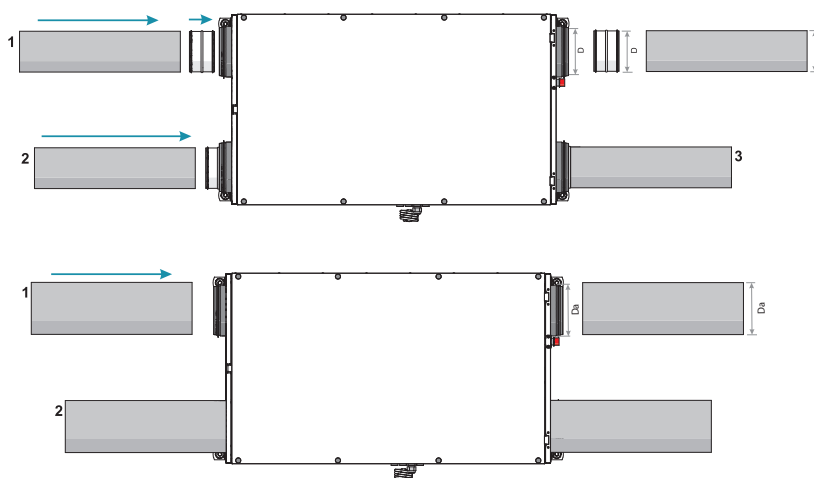


Figure 5.7.2. Drainage system installation ($\varnothing D=150\text{ mm}$)

Note. If the collector is located upstream, install the system with the condensate pump (offered as an accessory).

5.8. CONNECTION OF THE AIR DUCT



i **D or Da dimensions depend on unit.**

- The connected air ducts must not be bent and have separate fixing.
- Make sure that the fans can not be accessed through air duct heads. Otherwise, protective grid should be installed. You may choose the grid from the range of products provided in our website.
- Do not reduce the diameter of the piping near air inlet or exhaust ducts. If you want to reduce the airflow speed in the system, drop of pressure

and noise level, you can increase the diameter.

- In order to reduce the level of the noise in the air supply system, install dampers (see the chapter on air supply system installation).
- In order to reduce air loss in the system, the air ducts and profile components should be of class C and higher. The catalog on the above-mentioned items can be found in our website.
- External air and exhaust system piping should be isolated in order to prevent heat loss and condensation.
- Maintaining the distance of up to 8 meters between air intake and air exhaust ducts is recommended. Air supplying system should be installed away from potential air pollution sources.
- When installing air ducts next to the ventilation equipment, brackets must be used. They suppress vibration and assure secure installation of the various system parts. The necessary brackets can be found in our catalog or website.
- Air ducts are often mistakenly connected in inappropriate location. The ventilation units bear the labels indicating the correct air duct connection layout. Before starting up the system, carefully check if all related works have been performed properly.

For Smarty 2X P, air ducts of the following two sizes can be used: \varnothing D - 125 mm (a), \varnothing Da - 160 mm (b).

NOTE. In case air ducts of \varnothing D - 125 mm are used, using of NPU 125 coupling is required.
For Smarty 3X P, air ducts of the following two sizes can be used: \varnothing D - 160 mm or 150 mm (b).

5.9. CONNECTION OF THE UNIT TO ELECTRIC NETWORK

- Supply voltage to the unit must be connected by a qualified specialist following the manufacturer's instructions and applicable safety guidelines.
- The unit's power network voltage must correspond to electro technical specifications of the unit indicated in the technical decal.
- The unit's voltage, power and other technical specifications are provided in the unit's technical decal (on the unit casing). The unit must be connected to the voltage plug socket of the grounded power network in accordance with the applicable requirements.
- The unit must be earthed according to electrical equipment installation regulation.
- Using extension wires (cables) and power network plug socket distribution devices is not allowed.
- Prior to carrying out any ventilation unit installation and connection works (before the unit is commissioned), the unit must be disconnected from the power network.
- After installation of the ventilation unit, the power network plug socket must be accessible at any time and disconnection from the power network must be performed through the two-pole circuit breaker (by disconnecting phase pole and neutral).
- Before it is connected to the power network, the unit must be carefully checked for any damage (execution, control, and measurement nodes) made during transportation.
- The power cable can be replaced only by a qualified technician, having evaluated the rated power and current.



The manufacturer does not assume any liability for personal injuries and property damage due to nonconformance with the provided instructions.

5.10. START-UP RECOMMENDATIONS

5.10.1. SYSTEM PROTECTION

The control automatics of the unit have integrated protection against short circuit of those assemblies. The controllers have the following protections:

miniMCB

F1 - 1A(5x20) miniMCB protection;

Using the unit with external electrical protection is recommended.

SMARTY	2XP 1.1	2XP 1.2	3XP 1.1	3XP 1.2	4XP F2 1.1	4XP F2 1.2
Mains Fuse	16A	16A	16A	16A	16A	16A



To ensure safe maintenance of the unit, it is necessary to turn off main switch and/or external protection device.

5.10.2. PRE-STARTUP RECOMENDATIONS OF THE UNIT (IN THE PRESENCE OF THE ENDUSER)

Prior to start-up the system must be thoroughly cleaned. Check whether:

- operation systems and unit elements as well as automation and automation devices were not damaged during installation,
- all electrical devices are connected to power supply and fit for service,
- all necessary automation elements are installed and connected to power supply and miniMCB, EX1 terminal blocks,
- cable connection to miniMCB, EX1 terminal blocks comply with the existing power connection diagrams,
- all electrical equipment protection elements are properly connected (if they are additionally used),
- cables and wires correspond to all applicable safety and functional requirements, diameters, etc.,
- earthing and protection systems are properly installed,
- condition of all seals and sealing surfaces is correct.

6. MAINTENANCE

6.1. SAFETY INSTRUCTION



Unplug the unit from the mains before opening the door (disconnect the power plug from the outlet or in case a two-pole automatic circuit breaker installed, disconnect it as well. Make sure that it cannot be turned on by third parties) and wait until the fans completely stop (for about 2 min.).

6.2. GENERAL RECOMMENDATIONS FOR THE MAINTENANCE OF VENTILATION SYSTEM

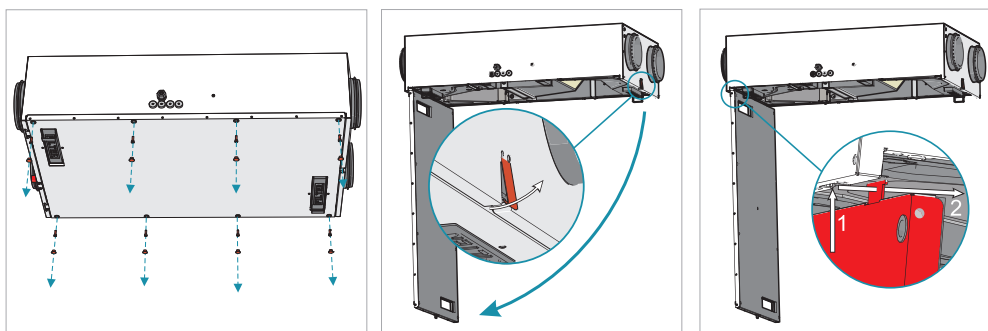
In order to ensure proper functioning of the system, maintenance requirements and its periods should be observed. Otherwise, the warranty shall be void. Some recommendations are provided in the table below, but they are just advisory, as the need for system maintenance depends on the location of the unit installation, the pollution of atmosphere, population, working hours, etc.

COMPONENT	DURING START-UP	AT LEAST EVERY 6 MONTHS
Filters	Check the cleanliness of the filters	Replace filters every 3 to 4 months or according to the control device indications. Check cleanliness. Clean, if necessary
Fans	Check the connections and the direction of rotation	Make sure that the impellers are not unbalanced. Make sure that the impellers do not cause noise when rotated by hand. Make sure that the fastening screws are not loose and free of mechanical damage. Check electrical connections and make sure that these are secured properly and are free of signs of corrosion.
Plate Heat exchanger	Check the cleanliness of the heat exchanger	Check cleanliness and clean, if necessary
Control panel	Check the connections	Check the connections
Electric heater	Check the connections	Clean off dust, and check the electrical components and connections of the heater
Pressure sensor	Check electrical connections	Check the operation
Temperature sensor	Check electrical connections	Check the operation
Air supply and extract system	Check the connections	Clean
Air duct system	Check the tightness	Clean
Dampers, diffusers, grid	Check the tightness of connections	Clean
Switching unit (contactor)		Every 3 to 4 months, visually assess the functioning of the switching unit (contactor), i.e. make sure that its casing has no signs of melting or is not thermally damaged in any way and does not produce any unusual sounds. All the contactors in the product or in its accessories must be checked.
Condensate trap and discharge assembly	Check the condensate discharge assembly and make sure that water runs from the drip tray properly.	Clean

6.3. COVER OPENING

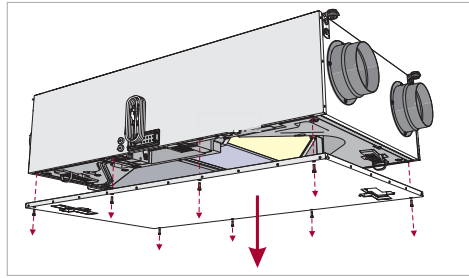
A1:

Smarty 2X P



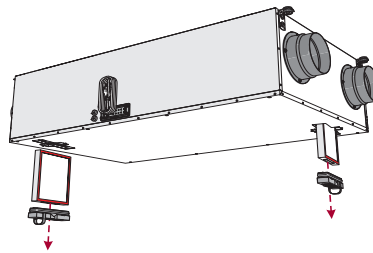
Smarty 3XP/4XP F2

A2:



6.4. FILTERS MAINTENANCE

- In order to remove the filters, open filter cover by pulling the strap and take out the filters. Use Coarse 65% filters or optionally the ePM1 70% filter for outdoor air filtration and the Coarse 65% filter for the exhaust air filtration.
- Dirty filters increase air resistance, this decreases the airflow into the rooms.



After changing the filters, please reset the filter timer. The instruction on resetting can be found in the control panel operation manual or on our website www.salda.it
Operation of the unit without filters is not allowed.



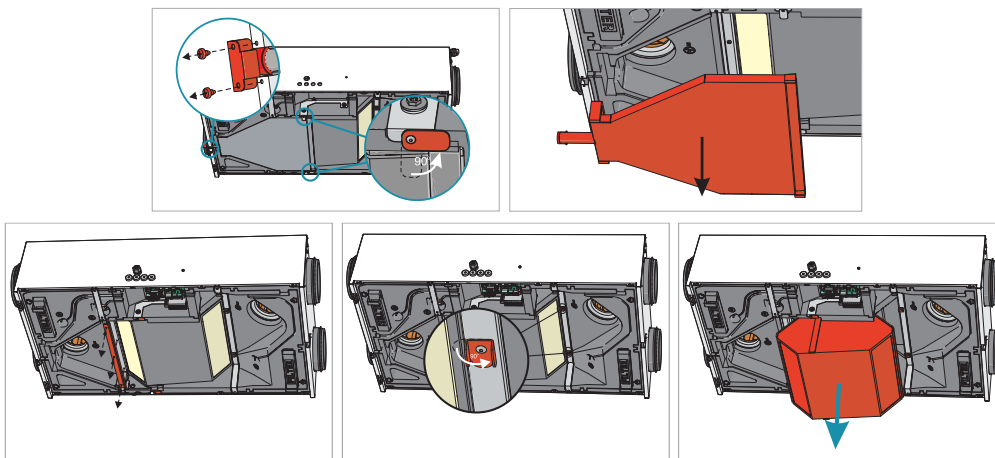
Change the filters every 3-4 months or according to the notification on the control device.

6.5. HEAT EXCHANGER MAINTENANCE

- Proceed to maintenance and repair every time the fan rotation is stopped. Clean the heat exchanger once per year.
- Prior to any maintenance, carefully remove the heat exchanger cassette. Submerge it in a bath and wash with warm soapy water (do not use soda). Then flush it under a small jet of hot water (too fast jet of water may cause folding of the plates). Install the heat exchanger back only when it is completely dry.

Smarty 2X P

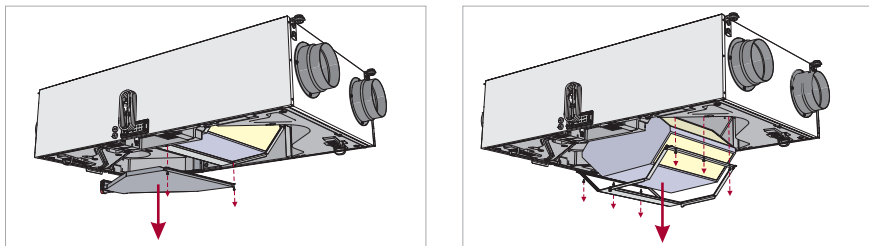
B1:



NOTE. Prior to performing step B1, steps A1 (1-3) should be carried out.

Smarty 3XP/4XP F2

B2:



6.6. FAN MAINTENANCE

- Fan maintenance should be performed by experienced and trained staff only.
- The fan should be inspected and cleaned at least once per year.
- Observe staff safety regulations during maintenance and repairs.
- The fans features a heavy-duty ball bearing design. The motor is completely sealed and free of maintenance.
- Detach the fan from the unit.
- The impeller should be particularly checked for built-up material or debris that may cause an imbalance. Excessive imbalance may lead to accelerated wear on motor bearings and vibration.
- Clean the impeller and inside housing with a mild detergent, water and damp, soft cloth.
- Do not use high-pressure cleaner, abrasives, sharp tools or caustic solvents that may scratch or damage the housing and impeller.
- Do not plunge the motor into any fluid while cleaning the impeller. Make sure the impeller's balance weights are not moved.
- Make sure the impeller is free of any obstacles.
- Install the fan back into the unit. Connect fan power and control signals.
- In case the fan after maintenance does not automatically start up or stop, contact the manufacturer. Malfunction of the fan can be identified by the pressure in the system (when pressure switches are connected). In case of any fault in the fan motor, a notice will appear on the control panel.

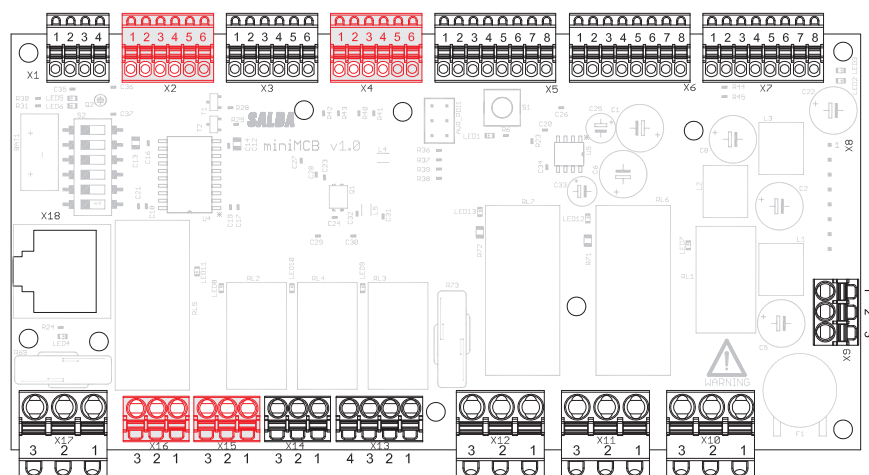
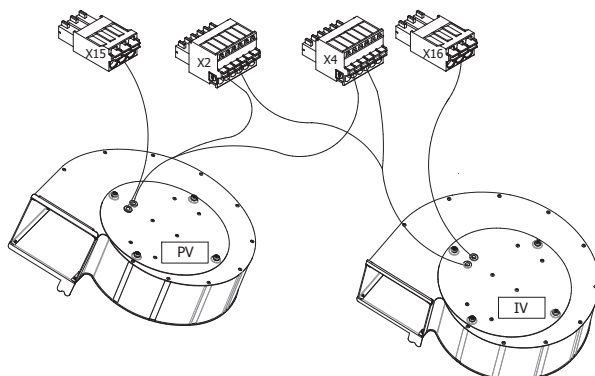
⚠ Prior to commencing any maintenance or repairs , make sure the ventilation units is disconnected from the power source.

Smarty XP units:

- Remove the fan connectors from the control board. Supply air fan connects to X15, X2, X4 connectors. Extract air fan connects to X16, X2, X4 connectors.

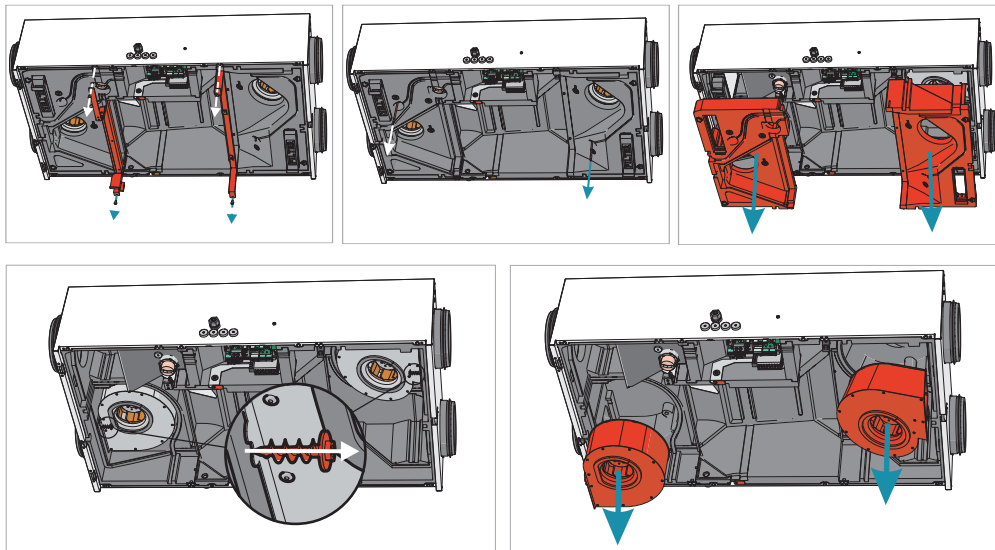
Note:

- X2 and X4 are the same for both fans.
- Reassembling must be executed in the reverse order.



Smarty 2X P

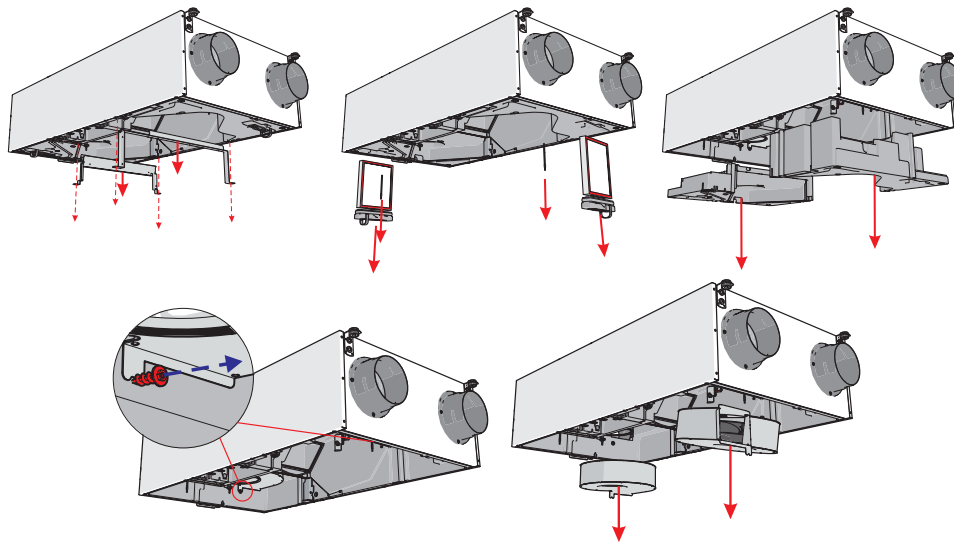
C1:



NOTE. Prior to performing step C1, steps A1 (1-3) and B1 (1-5) should be carried out.

Smarty 3XP/4XP F2

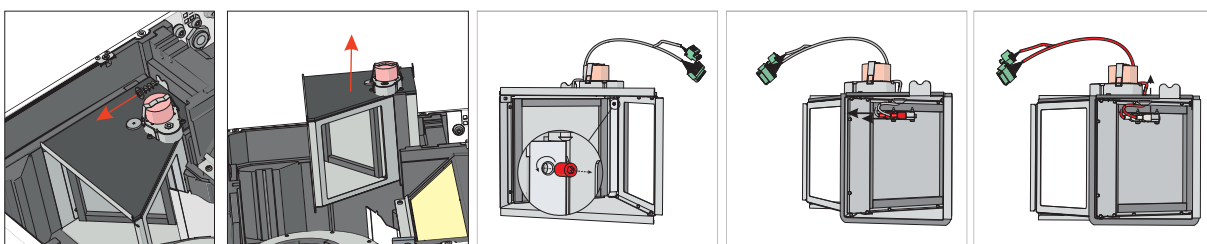
C2:

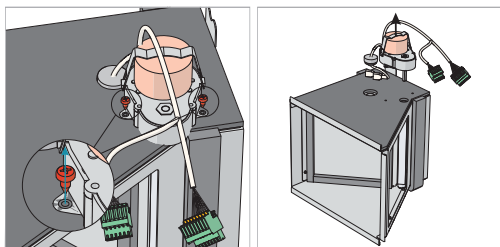


NOTE. Prior to performing step C2, steps A2 and B2 (1-3) should be carried out.

6.7. BYPASS DAMPERS MAINTENANCE

- Bypass damper must be disconnected from automation panel (connections X3 and X5).
- When removing the damper, steps A1 (1-3), B1 (1-3), C1 (1-3) should be performed for Smarty 2X P, and steps A2, B2 (1-3), C2 (1-2) for Smarty 3-4X P.
- Having removed the damper, loosen the screw supporting lugs. Disconnect contacts from the rear switch.
- Remove sealant with the wires and connections.
- Remove the screws.
- Remove the drive with all the wires.
- Reassembling must be executed in the reverse order : insert the wires with a rear switch connection through a hole, install back the sealant, insert the drive lug into the damper axis (the milled plate of the drive lug must be parallel to the damper axis plate, where the tightening screw hole is located).



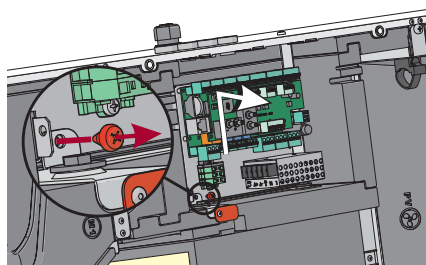


6.8. CONTROL BOARD MAINTENANCE

- Loosen the front screw that tightens the automation sole to the housing of the device.
- Disconnect the connectors from control board . Disconnect hoses from pressure sensors (Smarty 3XP/4XP F2 1.1).
- Remove the control board through the front part of the device.
- The connectors are marked according to connection location. Thus during control board installation please observe the marking of the connection location of connectors and controller. If the marking on the controller terminals is not visible follow the PCB information provided in "MCB miniMCB technical manual".

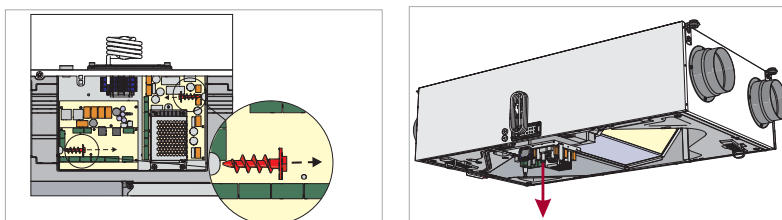
Smarty 2X P

E1:



Smarty 3XP/4XP F2

E2:



7. CONTROL

7.1. DEVICE CONTROL

Ventilation unit equipped with miniMCB control board can be controlled with remote controller, WEB interface or mobile app via MB-GATEWAY and BMS (Building Management System). More information provided in the table below.

With MB-GATEWAY	Remote control panels	BMS direct connection	Wireless communication
Web interface SALDA AIR mobile application BMS over Modbus TCP/IP BMS over BACnet TCP/IP	Stouch ST-SA-Control	Modbus RTU (RS485)	MB-GATEWAY + WIFI router

7.2. DEVICE FUNCTIONS

















All miniMCB control boards are run by the same software with all functions included. Full function list and description you can find on the MCB/miniMCB technical manual. However, operation and control of the device depends on the following factors:


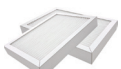
1. Selected control interface (remote control panel, MB-GATEWAY, etc.). The selected interface affects access to the information and settings, however, it does not affect the logic of control. Full access to the information and settings is available on ST-SA-Control, MB-GATEWAY WEB application and SALDA AIR mobile application.
2. Unit configuration (internal/external components, sensors and control board settings).



For unit control instructions, refer to the operation manual of the existing control device.

8. ACCESSORIES

SMARTY		2XP 1.1	2XP 1.2	3XP 1.1	3XP 1.2	4XP F2 1.1	4XP F2 1.2	
Outlet covers		WSG 160	FIT000403	FIT000403	FIT000403	FIT000403	FIT000403	
		ALU 125	FIT000126	FIT000126	-	-	-	
		ALU 160	FIT000127	FIT000127	FIT000127	FIT000127	FIT000127	FIT000127
Control		Network module MB-Gateway	ACC000269	ACC000269	ACC000269	ACC000269	ACC000269	
		Remote control panel ST-SA-Control	ACC000271	ACC000271	ACC000271	ACC000271	ACC000271	
		Remote control panel Stouch	ACC000272	ACC000272	ACC000272	ACC000272	ACC000272	
		Switch 774451 + 774411	ACC004460	ACC004460	ACC004460	ACC004460	ACC004460	
		Router TP-Link TL-WR802N	ACC000273	ACC000273	ACC000273	ACC000273	ACC000273	
External sensors		Sensor CO ₂ duct S-KCO2	ACC000277	ACC000277	ACC000277	ACC000277	ACC000277	
		Sensor CO ₂ room S-RCO2-F2	ACC000278	ACC000278	ACC000278	ACC000278	ACC000278	
		Sensor humidity duct S-KFF-U	ACC000279	ACC000279	ACC000279	ACC000279	ACC000279	
		Sensor humidity room S-RFF-U-D-F2	ACC000280	ACC000280	ACC000280	ACC000280	ACC000280	
		Temperature sensor TJ1TE-NTC10K3B4.5	ACC002560	ACC002560	ACC002560	ACC002560	ACC002560	
		Smoke detector UG-3-A4O	ACC004464	ACC004464	ACC004464	ACC004464	ACC004464	
Actuators		Actuator for damper CM230-1-F-L (2 Nm, on-off)	ACC000305	ACC000305	ACC000305	ACC000305	ACC000305	
Dampers		SKG-A 125	FIT000201	FIT000201	-	-	-	
		SKG-A 160	FIT000203	FIT000203	FIT000203	FIT000203	FIT000203	FIT000203
Silencers		MUTE 125X600	FIT000287	FIT000287	-	-	-	
		MUTE 125X900	FIT000288	FIT000288	-	-	-	
		MUTE 160X600	FIT000289	FIT000289	FIT000289	FIT000289	FIT000289	FIT000289
		MUTE 160X900	FIT000290	FIT000290	FIT000290	FIT000290	FIT000290	FIT000290

	EKA 125-0.3-1 f	ACC003721	ACC003721	-	-	-	-	
	EKA 125-0.6-1 f	ACC000329	ACC000329	-	-	-	-	
	EKA 125-0.9-1 f	ACC000330	ACC000330	-	-	-	-	
	EKA 125-1,2-1f	ACC003722	ACC003722	-	-	-	-	
	EKA 125-1,5-1 f	ACC000331	ACC000331	-	-	-	-	
	EKA 125-1,8-1 f	ACC000332	ACC000332	-	-	-	-	
	EKA 160-0.3-1 f	ACC003723	ACC003723	ACC003723	ACC003723	ACC003723	ACC003723	
	EKA 160-0.6-1 f	ACC003724	ACC003724	ACC003724	ACC003724	ACC003724	ACC003724	
	EKA 160-1.0-1 f	ACC000333	ACC000333	ACC000333	ACC000333	ACC000333	ACC000333	
	EKA 160-1,2-1f	ACC003725	ACC003725	ACC003725	ACC003725	ACC003725	ACC003725	
	EKA 160-1,5-1 f	ACC000334	ACC000334	ACC000334	ACC000334	ACC000334	ACC000334	
	EKA 160-2,0-1 f	ACC000335	ACC000335	ACC000335	ACC000335	ACC000335	ACC000335	
	EKA 160-2,4-1f	ACC003726	ACC003726	ACC003726	ACC003726	ACC003726	ACC003726	
El.heaters		EKA 160-3,0-1 f	ACC000336	ACC000336	ACC000336	ACC000336	ACC000336	
	EKA NIS 125-0,3-1f	ACC003802	ACC003802	-	-	-	-	
	EKA NIS 125-0.6-1 f	ACC000319	ACC000319	-	-	-	-	
	EKA NIS 125-0.9-1 f	ACC000320	ACC000320	-	-	-	-	
	EKA NIS 125-1,2-1f	ACC003803	ACC003803	-	-	-	-	
	EKA NIS 125-1.5-1 f	ACC000321	ACC000321	-	-	-	-	
	EKA NIS 125-1.8-1 f	ACC000322	ACC000322	-	-	-	-	
	EKA NIS 160-0,6-1f	ACC005245	ACC005245	ACC005245	ACC005245	ACC005245	ACC005245	
	EKA NIS 160-1.0-1 f	ACC000323	ACC000323	ACC000323	ACC000323	ACC000323	ACC000323	
	EKA NIS 160-1.2-1 f	ACC003804	ACC003804	ACC003804	ACC003804	ACC003804	ACC003804	
	EKA NIS 160-1.5-1 f	ACC000324	ACC000324	ACC000324	ACC000324	ACC000324	ACC000324	
	EKA NIS 160-2.0-1 f	ACC000325	ACC000325	ACC000325	ACC000325	ACC000325	ACC000325	
	EKA NIS 160-2.4-1 f	ACC000326	ACC000326	ACC000326	ACC000326	ACC000326	ACC000326	
	EKA NIS 160-3,0-2f	ACC003805	ACC003805	ACC003805	ACC003805	ACC003805	ACC003805	
	Filter sets		Filter set Smarty 2X P (Coarse- 65+Coarse-65-2pcs.)	ACC005249	ACC005249	-	-	-
			Filter set Smarty 3-4 X P (Coarse- 65+Coarse-65-2pcs.)	-	-	ACC005253	ACC005253	ACC005253

8.1. CONNECTION OF ACCESSORIES

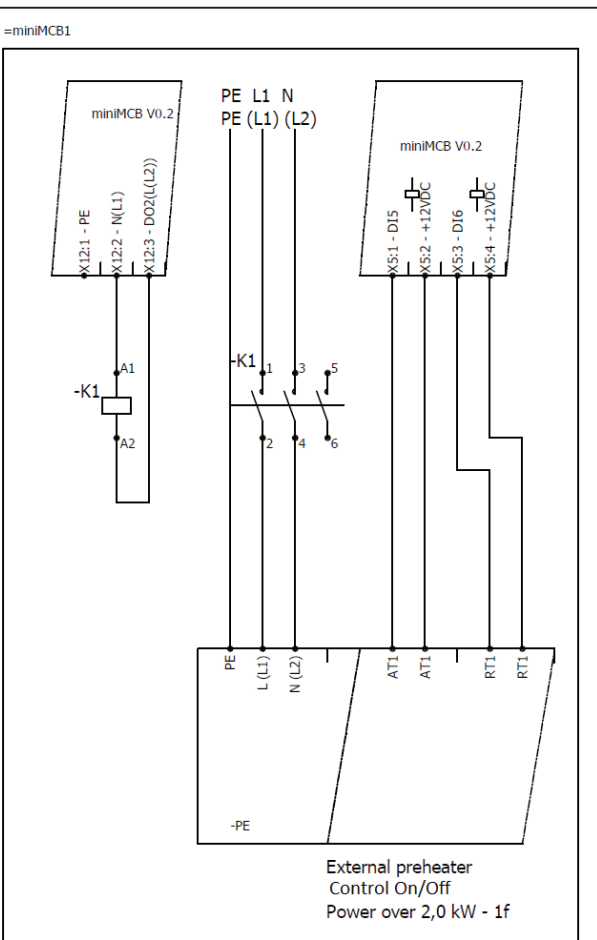
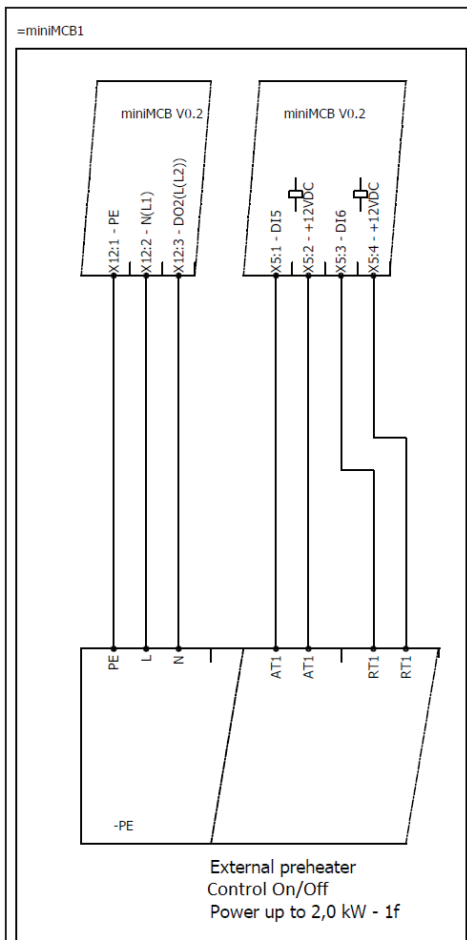
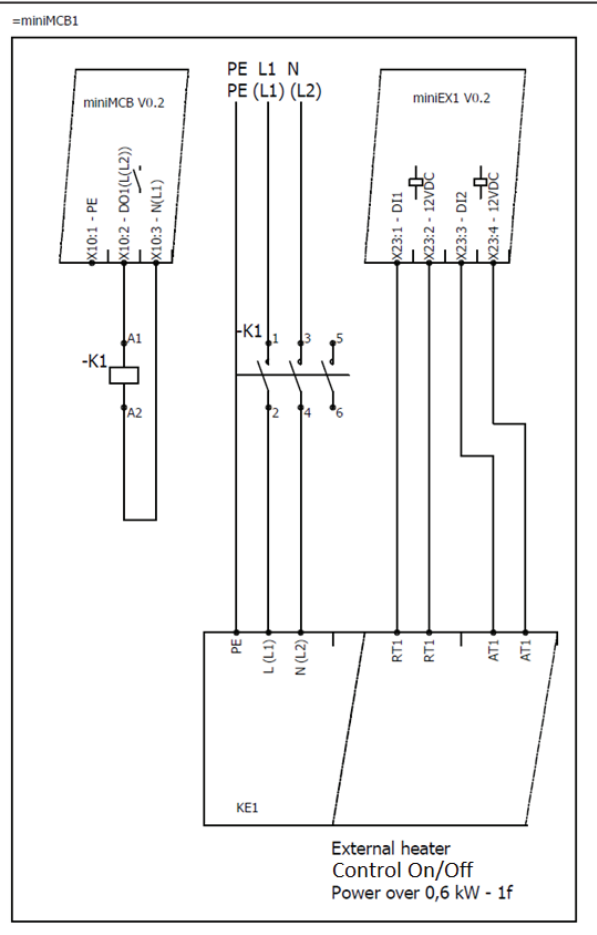
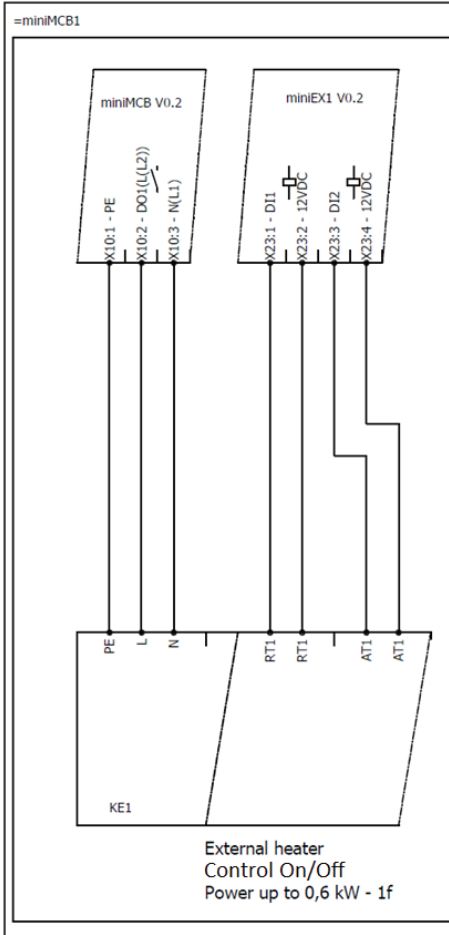
8.1.1. HEATER AND PRE-HEATER

8.1.1.1. VERSION 1.1.

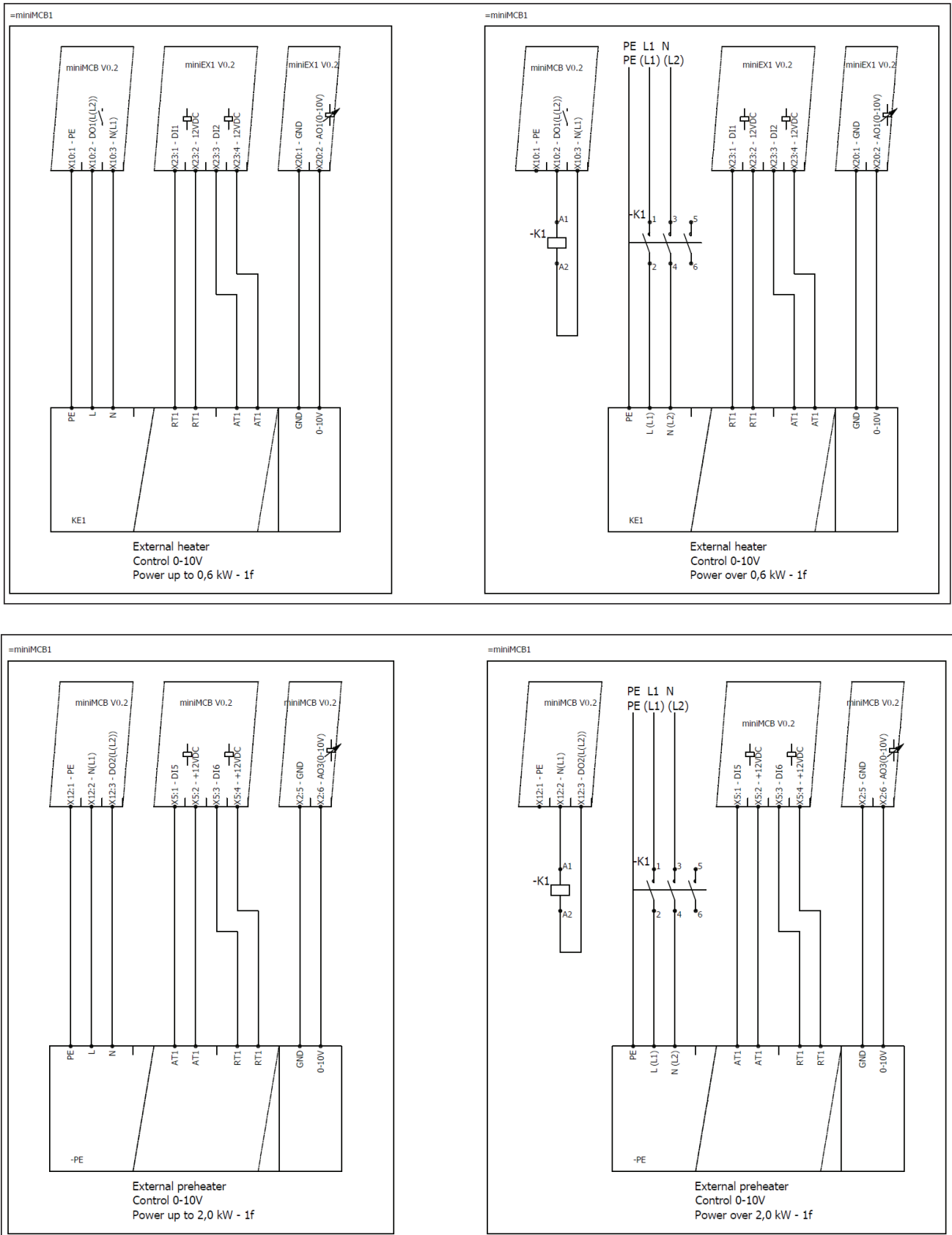
Smarty XP 1.1. units feature one connection for external electrical air heater and one for external air pre-heater. Heater/pre-heater can be controlled by the following signals:

- 0-10V – EKA NIS
- On-Off – EKA

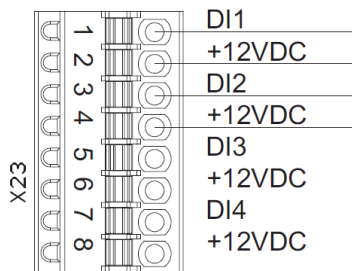
EKA connection:



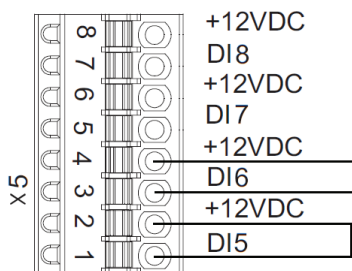
EKA NIS connection:



Automatic and manual protection devices must be connected to EX1 controller 's X23 connector when an electric heater is equipped with these connection terminals. Otherwise, jumpers are installed on the X23 connector protection inputs.



Automatic and manual protection devices must be connected to the controller's X5 connector when an electric pre-heater is equipped with these connection terminals. Otherwise, jumpers are installed on the X5 connector protection inputs.

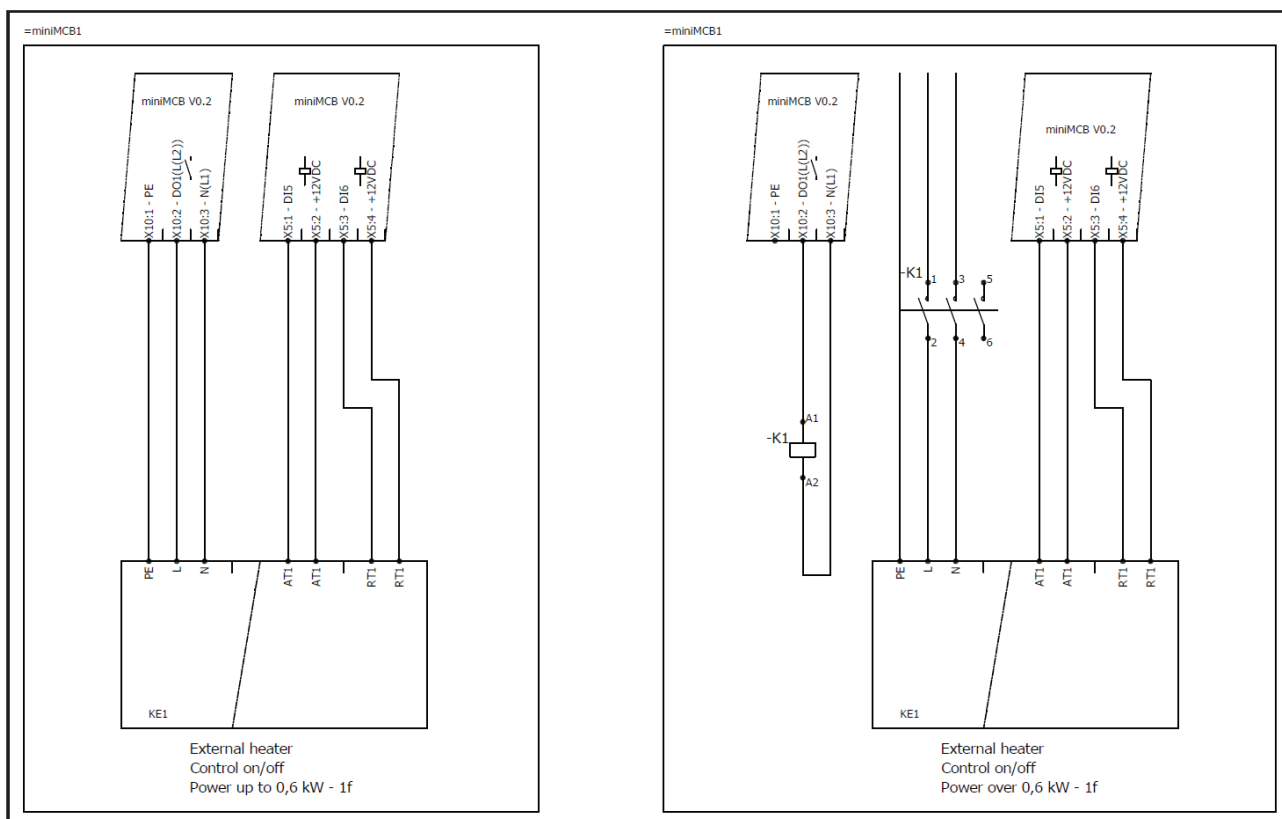


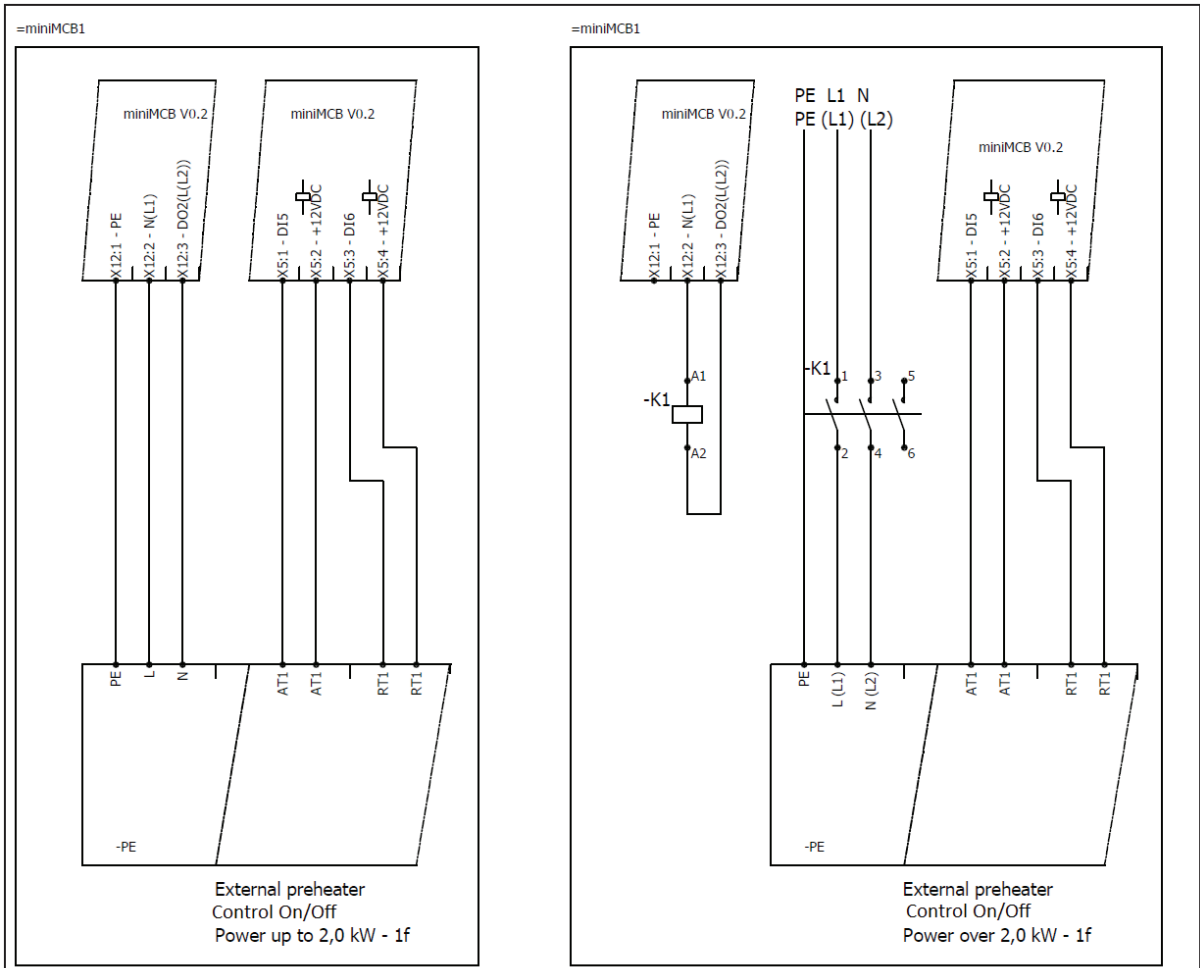
8.1.1.2. VERSION 1.2.

Smarty XP 1.2. units feature one connection of external electrical heater/pre-heater. In factory settings, the connection is intended for the pre-heater, however, it can be configured for the heater. Heater/pre-heater can be controlled by the following signals:

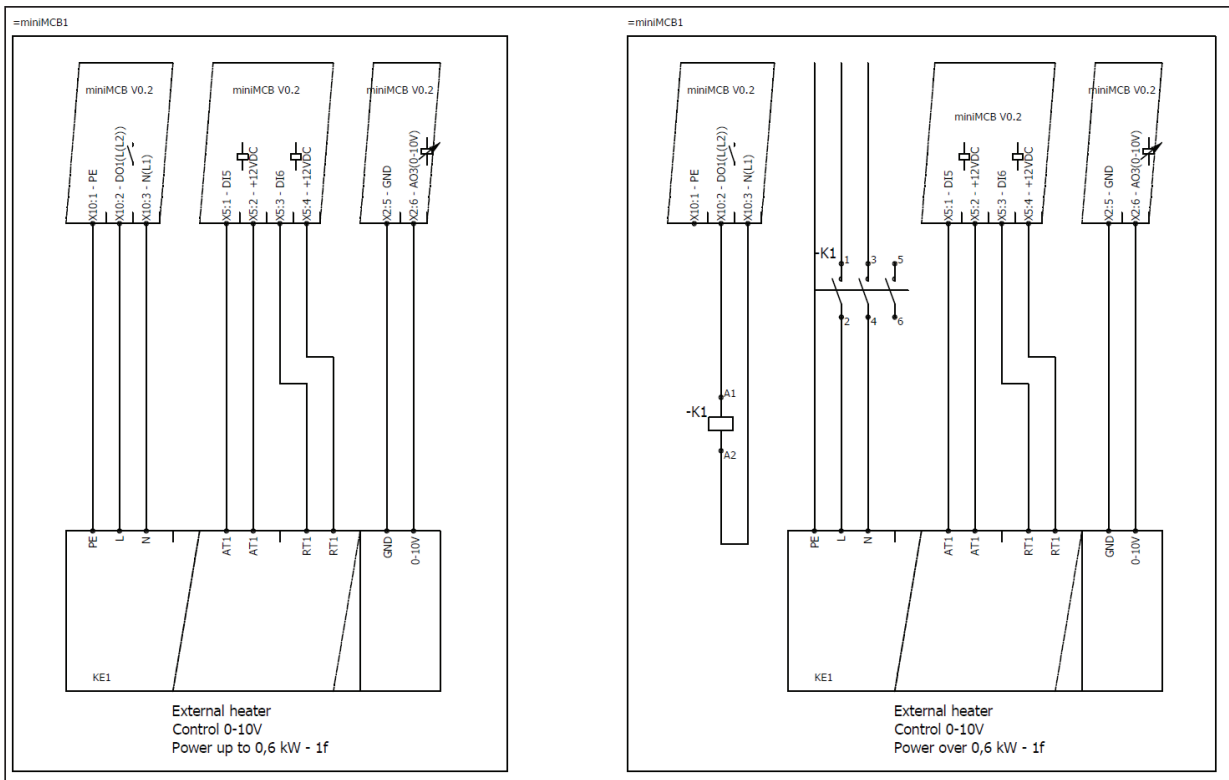
- 0-10V – EKA NIS
- On-off – EKA

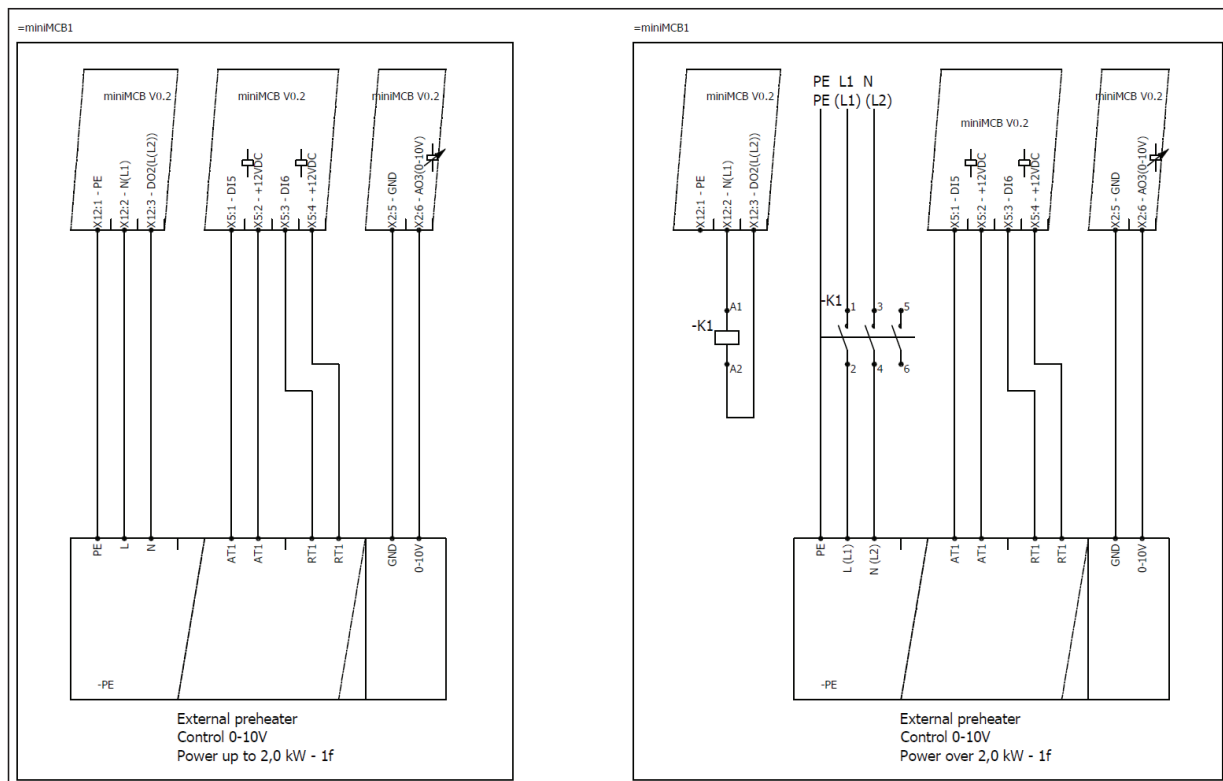
EKA connection:



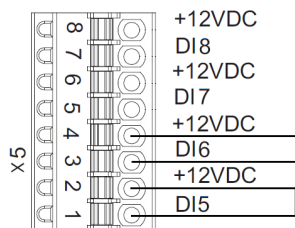


EKA NIS connection:





Automatic and manual protection devices must be connected to the controller's X5 connector when an electric heater/pre-heater is equipped with these connection terminals. Otherwise, jumpers are installed on the X5 connector protection inputs.

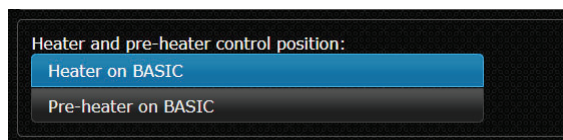


Since the pre-heater must be connected according to the factory settings, the settings should be changed in the environment of the MB-Gateway WEB application service or on the ST-SA-Control panel.

Settings in the environment of the MB-Gateway WEB application service

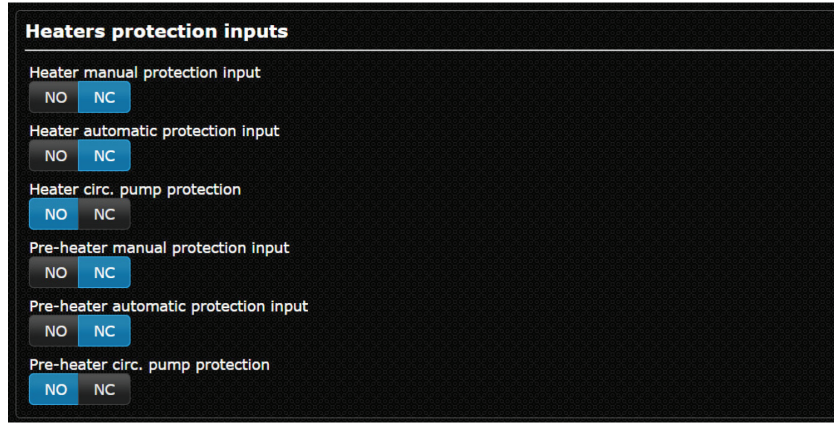
Change the settings as follows:

- Service password 4444;
- Service > Heaters > Heater and pre-heater position;
- Select either the heater or pre-heater to be switched on the MiniMCB basic.



¹For the Stouch control panel, changing of the settings is not possible

- Service > Digital inputs > Heater protection inputs
- Set the manual and automatic protection device modes of the heater or pre-heater (NC by default).



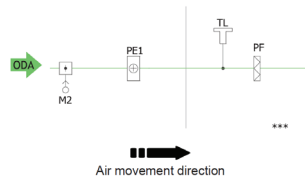
• Service > Heaters > Supply air heater or outdoor air pre-heater
 Set either a heater or pre-heater and the type of the heater or pre-heater as well as the steps to be performed in case of protection signal activation.

Settings with the ST-SA-Control panel

1. Go to Menu/Service/Heaters. Enter the Service password (the initial password – 4444);
2. Select Control Position as 'Heater on basic' or 'Pre-heater on basic'.
3. Go to Menu/Service/Heaters/Heaters and set the heater type
 0.10VDC – 0-10 control,
 ON/OFF – On/Off control,
 None – heater switch-off, and also specify the system response protection signal.
4. Go to Menu/Service/Heaters/Preheater. Set type '0..10VDC' 0-10 control, 'ON/OFF' On/Off control, 'None' – pre-heater switch-off. Set the system response protection signal.
5. Go to Menu/Service/Digital inputs/Heater protection. Set the manual and automatic protection device modes (NC by default).
6. Go to Menu/Service/Digital inputs/Preheater protection. Set the manual and automatic protection device modes (NC by default).

Pre-heater installation diagram

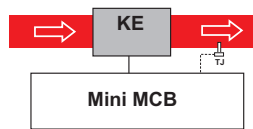
Installation based on air direction Air Damper M2 > Pre-Heater PE1 > Air Handling Unit.



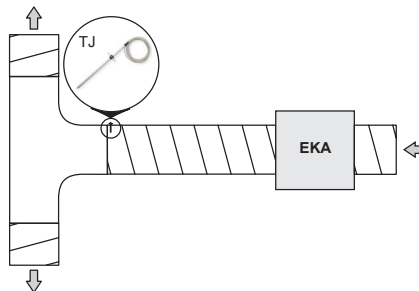
Only pre-heaters with up to 2 kW power circuit can be connected directly to the control board. The pre-heaters of higher power must be connected to separate electric power circuit.

Heater Installation Diagram

Electric heater must be installed inside the air duct. The layout is based on airflow direction Electric Heater > Supply Air Sensor (TJ).



When using the supply air heater, the supply air sensor (TJ) must be installed downstream the heater (or cooler) at the length of sensor cable allows or up to the first branching or bend of air transportation system.

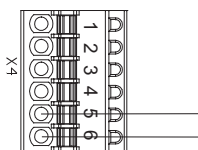


Only heaters with up to 0.6 kW power circuit can be connected directly to the control board. The heaters of higher power heaters must be connected to separate electric power circuit.

8.1.2. FIRE PROTECTION SIGNAL INPUT (FIRE PROTECTION INPUT (NC))

Fire protection signal input must be normally closed, until the fire protection system is not connected a jumper is installed in the factory.

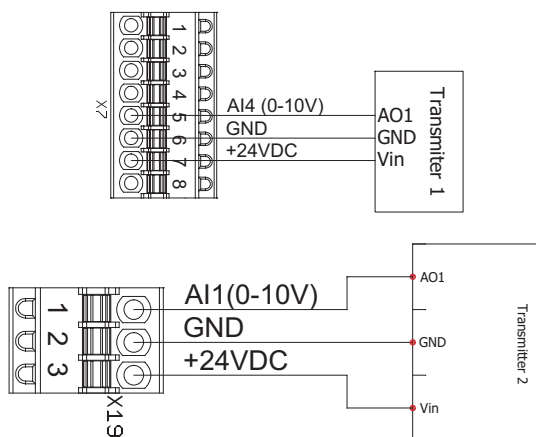
Automation controller A zone X4



8.1.3. EXTERNAL CO₂/RH SENSORS

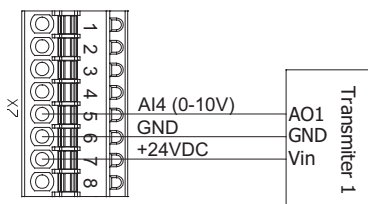
Smarty XP 1.1. units feature two connections for external CO₂ /RH (input 0-10VDC) sensors.

Sensors connection:



Smarty XP 1.2. units feature one connection for external CO₂ /RH (input 0-10VDC) sensors.

Sensors connection:

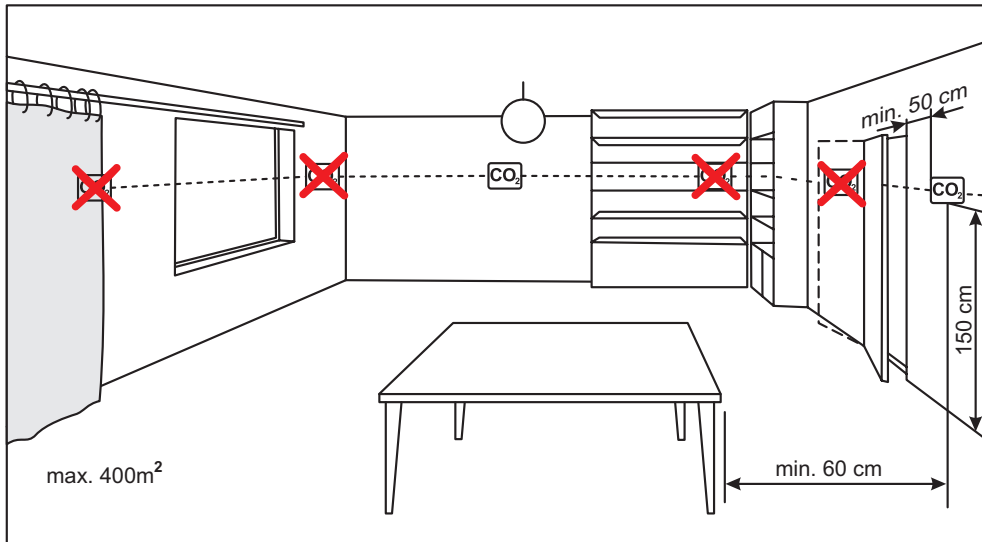


These sensors feature 3 functions: Supply RH, Extract RH and Extract CO₂.

Supply RH transmitter shall be installed inside supply air duct.

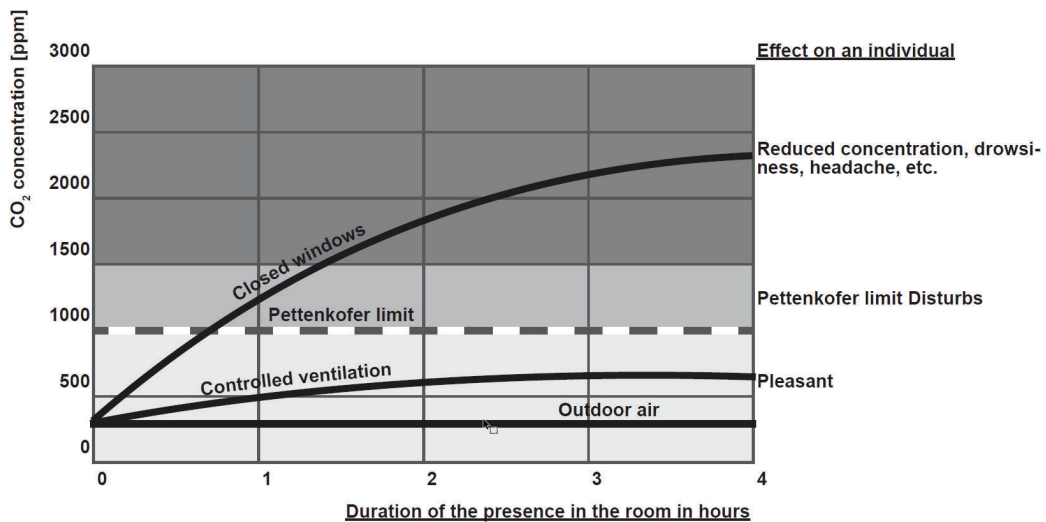
Extract RH and Extract CO₂ transmitters shall be installed inside extract air duct or room.

8.1.4. ROOM CO₂ TRANSMITTER INSTALLATION RECOMMENDATION



If the duct CO₂ transmitter is used, it must be installed in the extract air duct. To install duct transmitters, hole drilling tools are required .

8.1.5. CO₂ CONCENTRATION ACCORDING TO PETTENKOFER LIMIT



8.1.6. CONECTION OF SUPPLY AND EXHAUST AIR DAMPERS

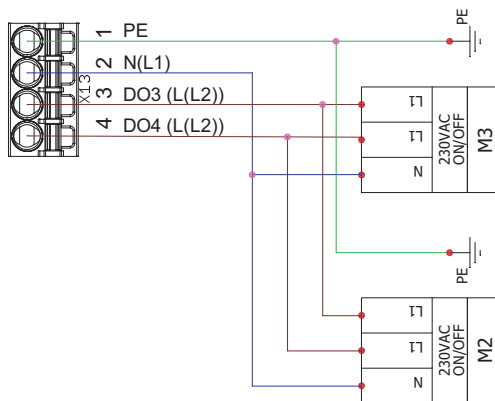
All versions of Smarty XP can be equipped with outdoor air and exhaust air dampers. Dampers are operated by Open/Close actuators.

Installation diagram

See PIPING AND INSTRUMENTATION DIAGRAM.

Wiring diagram

Automation controller D zone. Upon activation of output X13:3, the dampers open. Upon activation of output X13:4, the dampers close.

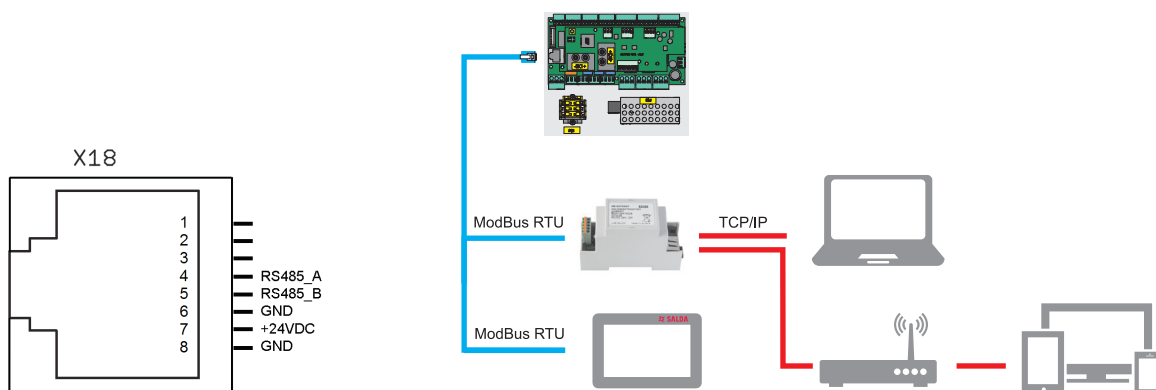


8.1.7. CONNECTION OF REMOTE CONTROL PANEL OR MODBUS

Wiring diagram.

Automation controller F zone, X18 connector.
Switch position for X18 connector configuration

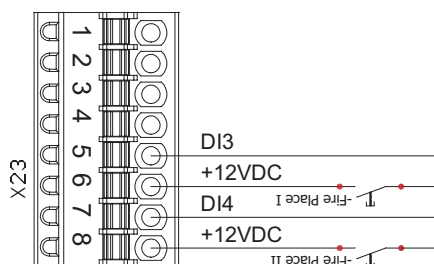
Switch	Position	Purpose
S2	1	120R line termination resistor (On/Off)



8.1.8. FIRE PLACE CONNECTION (SMARTY XP 1.1)

Wiring diagram.

Automation controller C zone, X23 connector.



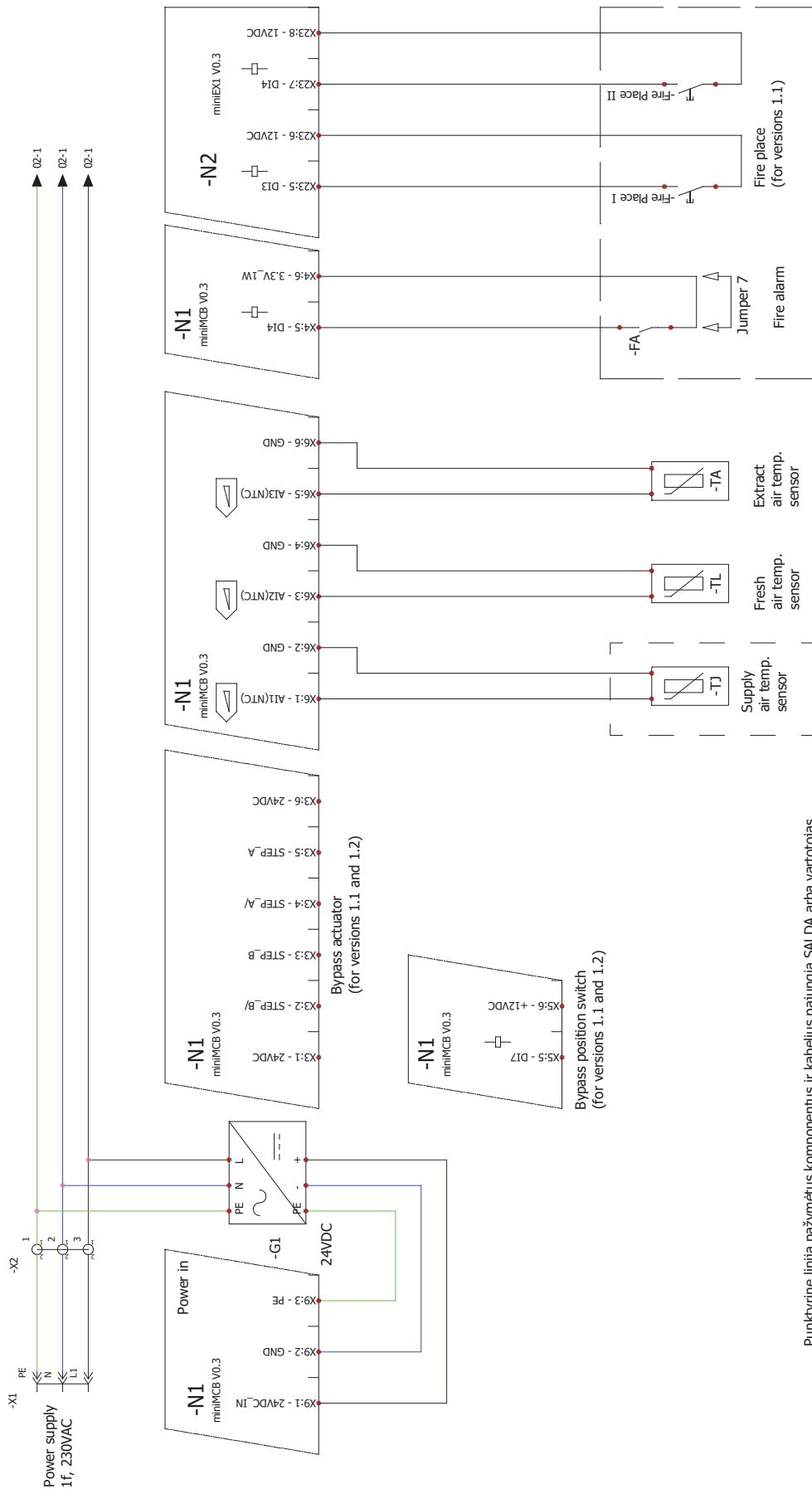
LED INDICATION

miniMCB		miniEX1	
LED1	3.3V miniMCB power indication (1W mode)	LED1	EX1 status LED
LED2	12V miniMCB power indication		
LED3	3.3V miniMCB power indication (ON mode)		
LED4	MiniMCB status LED		
LED5	Communication line Transmit indication		
LED6	Communication line Receive indication		
LED7	24V peripheral POWER ON indication		

8.1.9. RECOMMENDED SCHEME FOR CONNECTION OF INTERNAL AND EXTERNAL COMPONENTS



*Only Smarty 1.1 versions have N2 module.



Punktyrne linija pažymėjus komponentus ir kabelius pajungia SALDA arba vartotojas.
Components and cables marked with the dash line connected by SALDA or customer.

Figure 8.1.9.1. SMARTY XP (219.1017.0.1.1-PS)

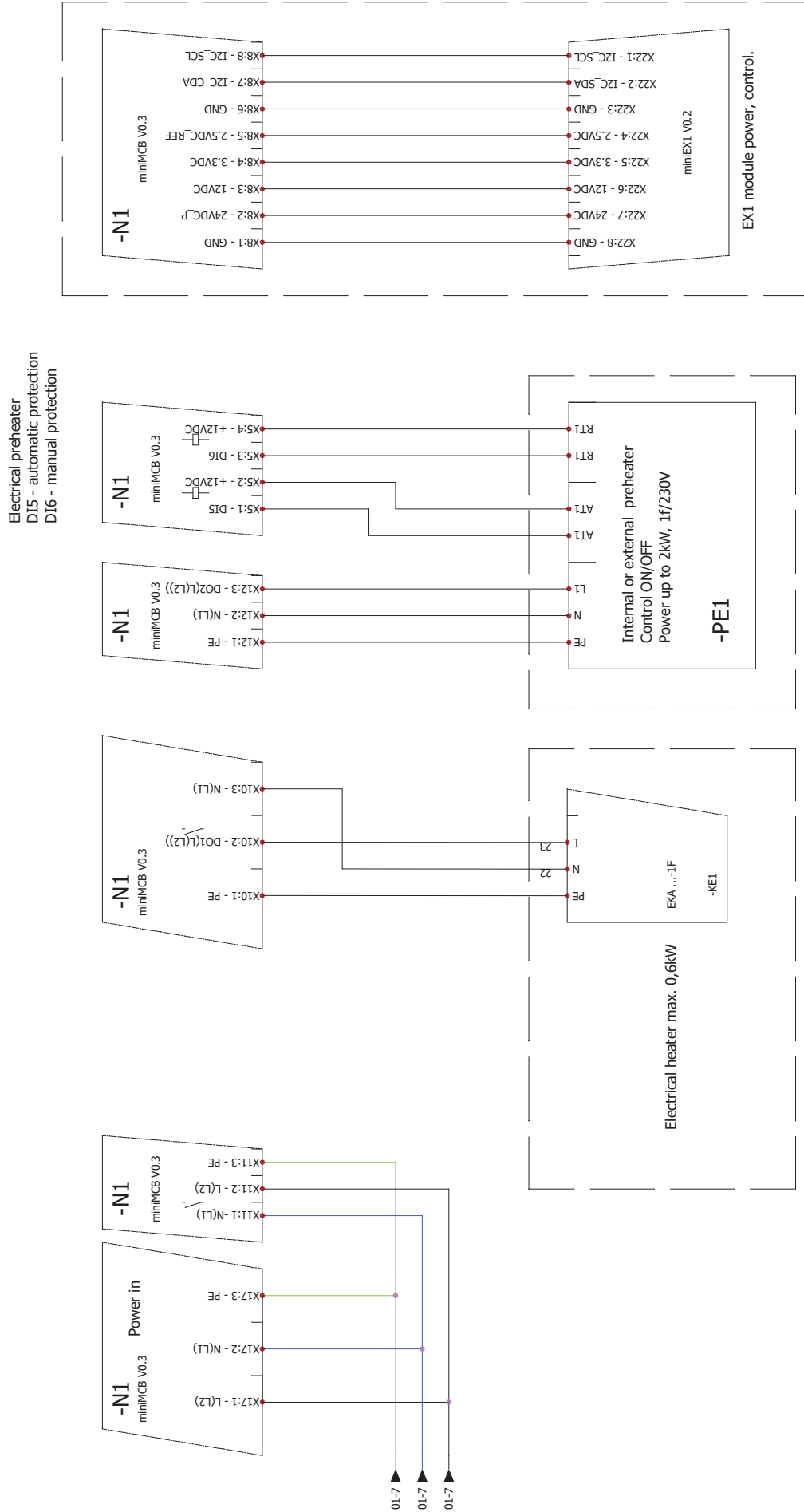
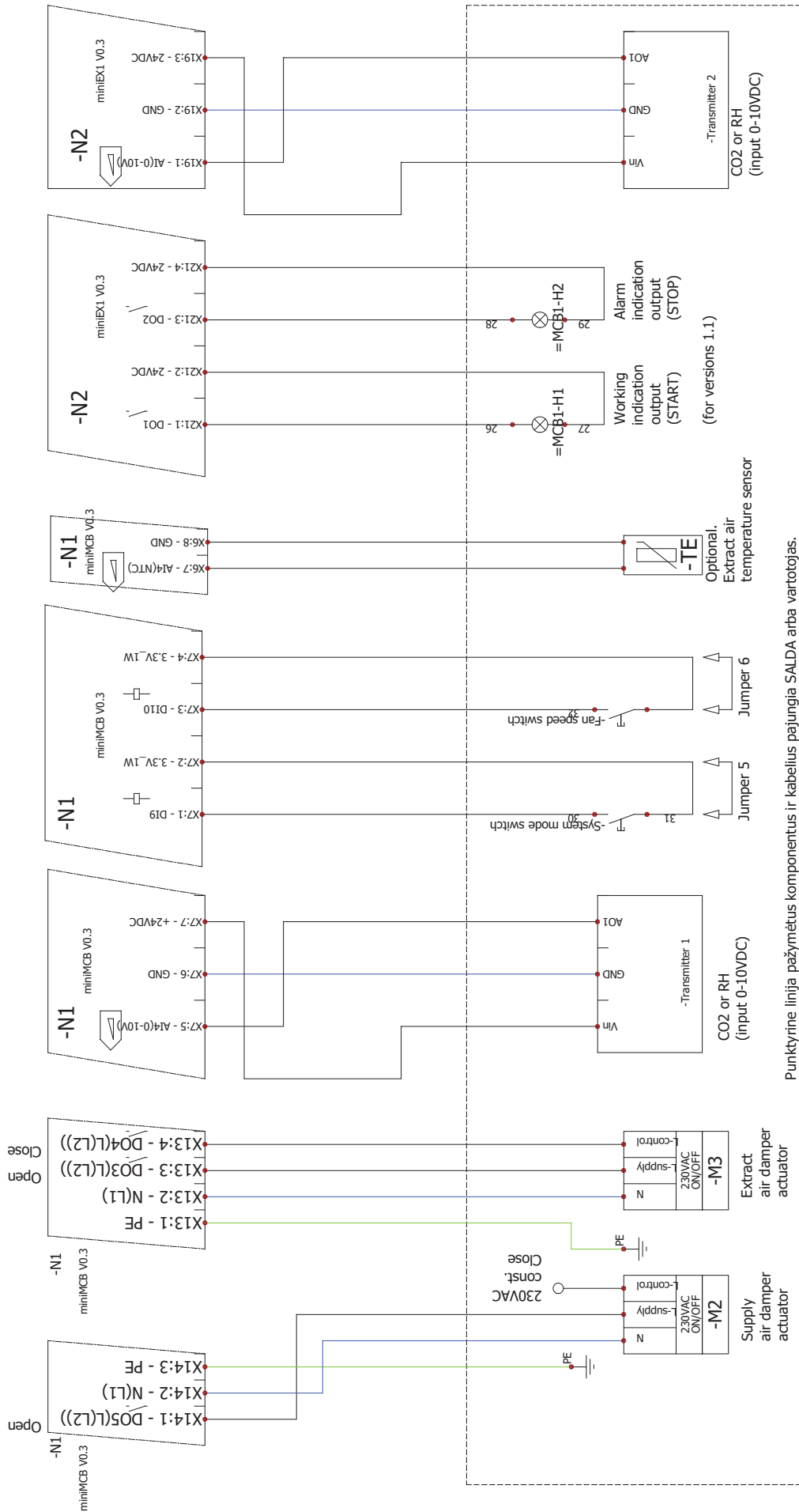


Figure 8.1.9.2. SMARTY XP (219.1017.0.1.2-PS)

Punktyrine linija pažymėtus komponentus ir kabelius pajungia SALDA arba vartotojas.
Components and cables marked with the dash line connected by SALDA or customer.



Punktyrne linija pažymėtus komponentus ir kabelius pajungia SALDA arba vartotojas.
Components and cables marked with the dash line connected by SALDA or customer.

Figure 8.1.9.3. SMARTY XP (219.1017.0.1.3-PS)

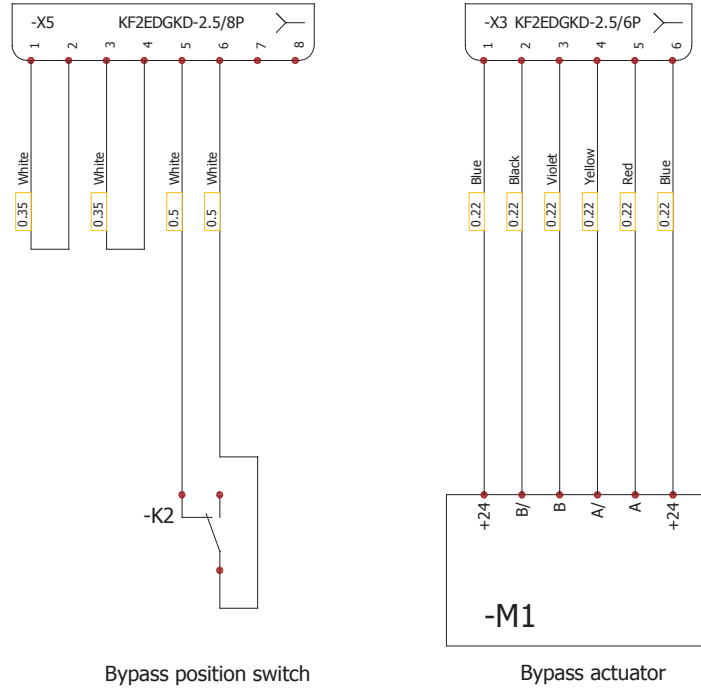


Figure 8.1.9.4. Bypass wiring (221.1055.0.1.0-PS)

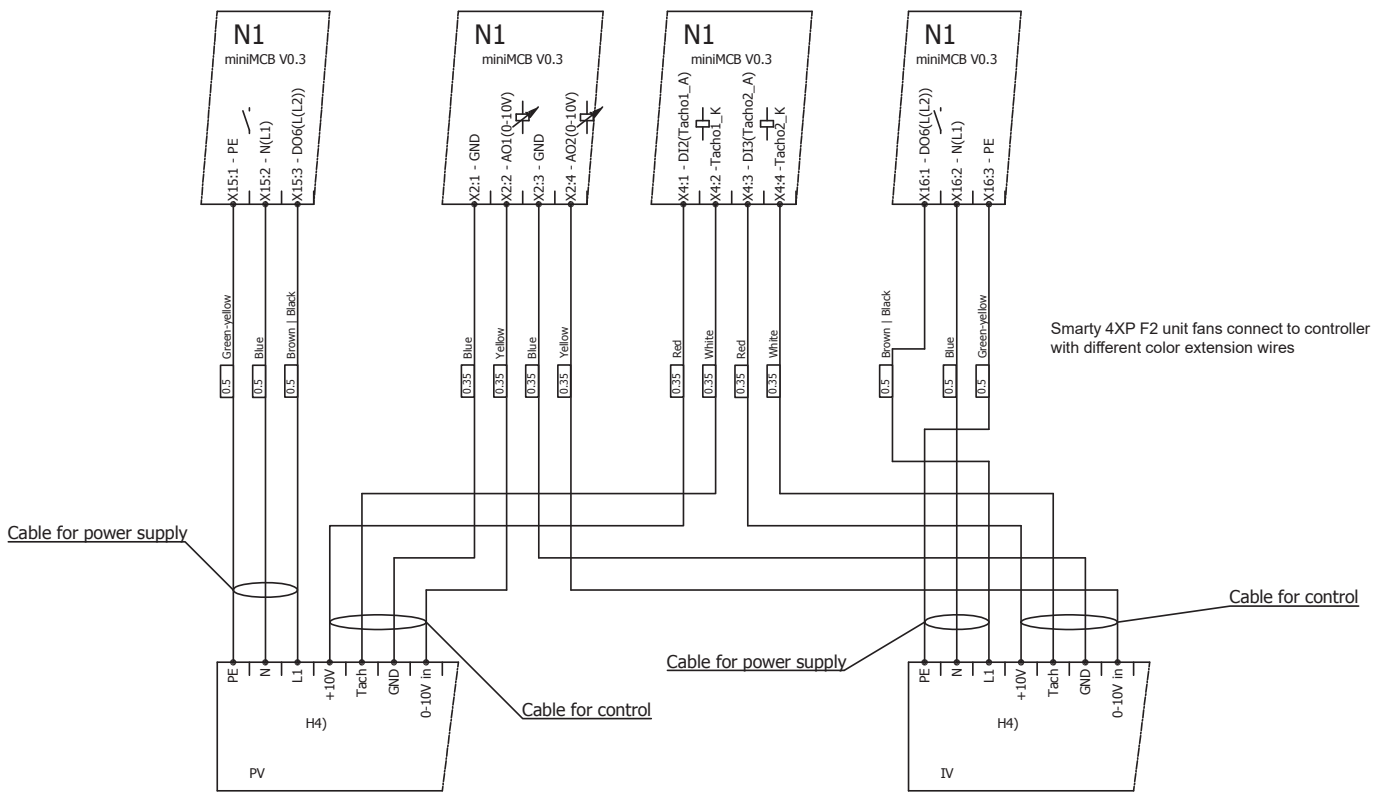


Figure 8.1.9.5. Fans (MiniMCB)

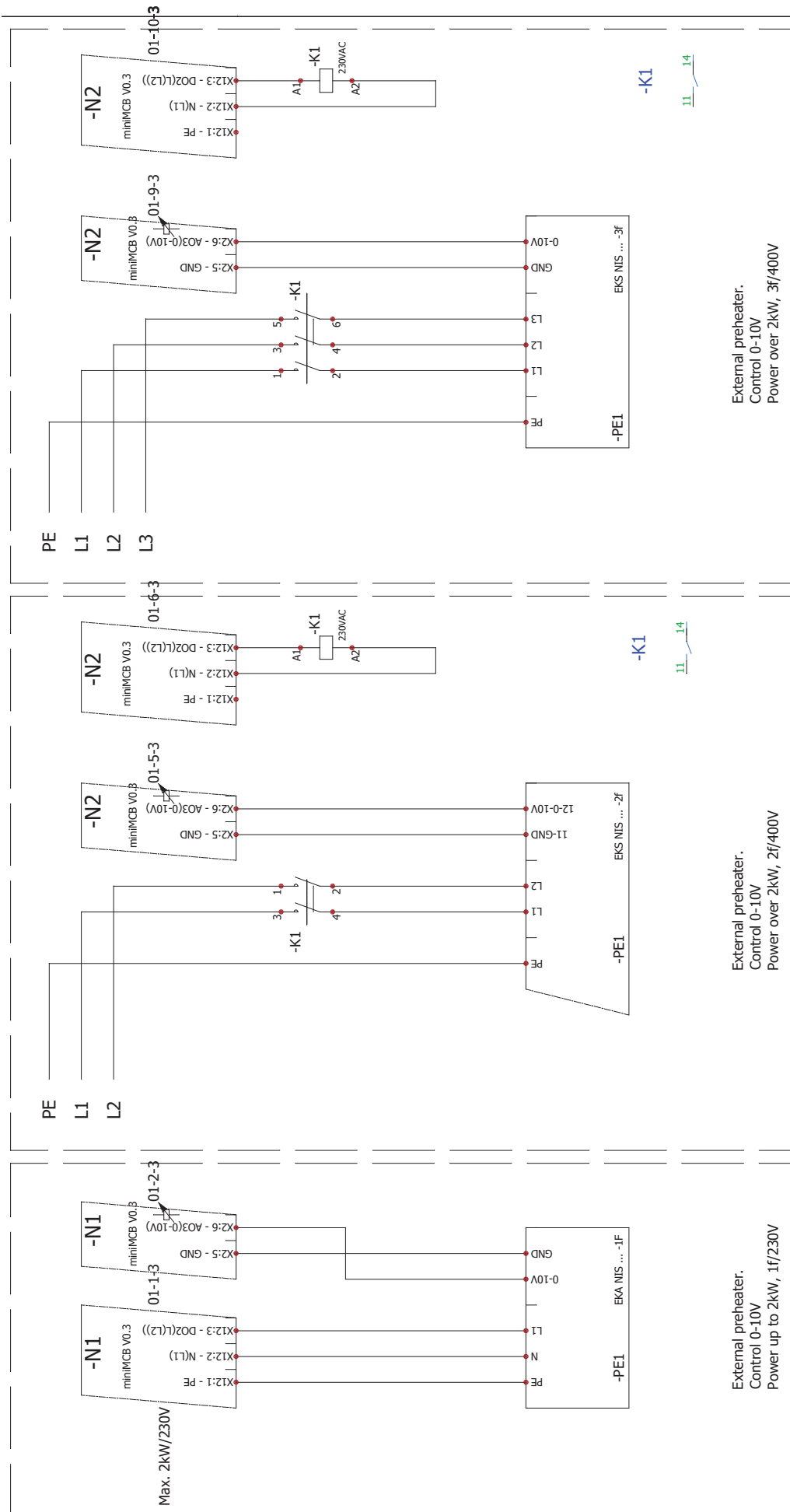


Figure 8.1.9.6. External preheater (SP45)

9. POSSIBLE FAULTS AND TROUBLESHOOTING

FAILURE	CAUSE	EXPLANATION / CORRECTIVE ACTIONS
Unit is not operating	No supply voltage	Check whether the device is connected to the power network
	Protection device is off or the current leakage relay is active (if installed by the installer)	Switch on only if the unit condition has been evaluated by a qualified electrician. If the system failed, the failure MUST BE rectified prior to switching it on
Air supply heater or pre-heater is not operating or malfunctioning (if installed)	Too low airflow in air ducts activates automatic protection	Check if air filters are not clogged Check if fans are rotating
	Manual safety device is activated	Possible heater or unit failure. Service staff MUST be contacted to identify and eliminate the failure .
Too low air flow at rated fan speed	Clogged supply and/or extract air filter(s)	Filter replacement needed
Filters are clogged and no message is shown on the remote control panel	Wrong time on filter timers or their switch is broken, or its pressure is set improperly.	Shorten filter timer time to the message of clogged filters or replace the pressure switch of the filters, or set their proper pressure.

10.ECODESIGN DATA TABLE

MODEL			SMARTY 2XP 1.1			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]			
Average	Clock control (standard)	0,95	-35,1	A	418	4486
	Central demand control (opt. with 1 sensor)	0,85	-37,4	A	344	4530
	Local demand control (opt. with 2 sensors)	0,65	-41,4	A	220	4617
Cold	Clock control (standard)	0,95	-72,6	A+	955	8776
	Central demand control (opt. with 1 sensor)	0,85	-75,3	A+	881	8861
	Local demand control (opt. with 2 sensors)	0,65	-80,1	A+	757	9032
Warm	Clock control (standard)	0,95	-11,0	E	373	2028
	Central demand control (opt. with 1 sensor)	0,85	-13,0	E	299	2048
	Local demand control (opt. with 2 sensors)	0,65	-16,5	E	175	2088
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	86,3			
Maximum flow rate		[m ³ /h]	218			
Electric power input of the fan drive at maximum flow rate		[W]	104			
Sound power level (Lwa)		[dB(A)]	49			
Reference flow		[m ³ /s]	0,042			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,33			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

MODEL			SMARTY 2XP 1.2			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]		[kWh/a]	[kWh/a]
Average	Clock control (standard)	0,95	-35,1	A	418	4486
	Central demand control (opt. with 1 sensor)	0,85	-37,4	A	344	4530
Cold	Clock control (standard)	0,95	-72,6	A+	955	8776
	Central demand control (opt. with 1 sensor)	0,85	-75,3	A+	881	8861
Warm	Clock control (standard)	0,95	-11,0	E	373	2028
	Central demand control (opt. with 1 sensor)	0,85	-13,0	E	299	2048
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	86,3			
Maximum flow rate		[m ³ /h]	218			
Electric power input of the fan drive at maximum flow rate		[W]	104			
Sound power level (Lwa)		[dB(A)]	49			
Reference flow		[m ³ /s]	0,042			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,33			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

MODEL			SMARTY 3XP 1.1			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]			
Average	Clock control (standard)	0,95	-36,1	A	362	4447
	Central demand control (opt. with 1 sensor)	0,85	-38,2	A	298	4494
	Local demand control (opt. with 2 sensors)	0,65	-41,7	A	193	4590
Cold	Clock control (standard)	0,95	-73,3	A+	899	8699
	Central demand control (opt. with 1 sensor)	0,85	-75,8	A+	835	8792
	Local demand control (opt. with 2 sensors)	0,65	-80,3	A+	730	8979
Warm	Clock control (standard)	0,95	-12,2	E	317	2011
	Central demand control (opt. with 1 sensor)	0,85	-14,0	E	253	2032
	Local demand control (opt. with 2 sensors)	0,65	-17,0	E	148	2075
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	85			
Maximum flow rate		[m ³ /h]	395			
Electric power input of the fan drive at maximum flow rate		[W]	174			
Sound power level (Lwa)		[dB(A)]	45			
Reference flow		[m ³ /s]	0,077			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,28			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

MODEL			SMARTY 3XP 1.2			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]			
Average	Clock control (standard)	0,95	-36,1	A	362	4447
	Central demand control (opt. with 1 sensor)	0,85	-38,2	A	298	4494
Cold	Clock control (standard)	0,95	-73,3	A+	899	8699
	Central demand control (opt. with 1 sensor)	0,85	-75,8	A+	835	8792
Warm	Clock control (standard)	0,95	-12,2	E	317	2011
	Central demand control (opt. with 1 sensor)	0,85	-14,0	E	253	2032
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	85			
Maximum flow rate		[m ³ /h]	395			
Electric power input of the fan drive at maximum flow rate		[W]	174			
Sound power level (Lwa)		[dB(A)]	45			
Reference flow		[m ³ /s]	0,077			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,28			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

MODEL			SMARTY 4XP F2 1.1			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]			
Average	Clock control (standard)	0,95	-33,0	B	464	4389
	Central demand control (opt. with 1 sensor)	0,85	-35,6	A	381	4443
	Local demand control (opt. with 2 sensors)	0,65	-40,1	A	241	4551
Cold	Clock control (standard)	0,95	-69,6	A+	1001	8586
	Central demand control (opt. with 1 sensor)	0,85	-72,7	A+	918	8691
	Local demand control (opt. with 2 sensors)	0,65	-78,3	A+	778	8902
Warm	Clock control (standard)	0,95	-9,4	F	419	1985
	Central demand control (opt. with 1 sensor)	0,85	-11,7	E	336	2009
	Local demand control (opt. with 2 sensors)	0,65	-15,7	E	196	2058
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	83,1			
Maximum flow rate		[m ³ /h]	570			
Electric power input of the fan drive at maximum flow rate		[W]	350			
Sound power level (Lwa)		[dB(A)]	55			
Reference flow		[m ³ /s]	0,11			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,37			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

MODEL			SMARTY 4XP F2 1.2			
Climate zone	Control typology	Control factor	Specific energy consumption (SEC)	SEC Class	AEC	AHS
			[kWh/m ² /a]			
Average	Clock control (standard)	0,95	-33,0	B	464	4389
	Central demand control (opt. with 1 sensor)	0,85	-35,6	A	381	4443
Cold	Clock control (standard)	0,95	-69,6	A+	1001	8691
	Central demand control (opt. with 1 sensor)	0,85	-72,7	A+	918	8902
Warm	Clock control (standard)	0,95	-9,4	F	419	1985
	Central demand control (opt. with 1 sensor)	0,85	-11,7	E	336	2009
Declared typology			Bidirectional			
Type of drive installed (fan)			Variable			
Type of heat recovery system			Recuperative			
Thermal efficiency of heat recovery		[%]	83,1			
Maximum flow rate		[m ³ /h]	570			
Electric power input of the fan drive at maximum flow rate		[W]	350			
Sound power level (Lwa)		[dB(A)]	55			
Reference flow		[m ³ /s]	0,11			
Reference pressure difference		[Pa]	50			
SPI		[W/(m ³ /h)]	0,37			
Declared maximum internal leakage rates		[%]	1,2			
Declared maximum external leakage rates		[%]	1,2			
Position and description of visual filter warning for RVU's			Timer			
ErP Compliance			2018			
Internet address for disassembly instructions			www.salda.it			

11. DECLARATION OF CONFIRMITY

Manufacturer

SALDA, UAB
Ragainės g. 100
LT-78109 Šiauliai, Lithuania
Tel.: +370 41 540415
www.salda.lt

Hereby confirms that the following products - Air handling units:

Smarty XP*

(where by „**“ indicates possible unit installation type and modification)

Provided it was delivered and installed in the facility in accordance with the included installation instructions, comply with all applicable requirements in the following directives:

Machinery Directive 2006/42/EC
EMC Directive 2014/30/EU
Low Voltage Directive 2014/35/EU
Ecodesign Directive 2009/125/EC
RoHS 2 Directive 2011/65/EU

The following regulations are applied in applicable parts:

Ecodesign requirements for ventilation units Nr. 1253/2014
Energy labeling of residential units Nr. 1254/2014

The following harmonized standards are applied in applicable parts:

EN 13141-7:2010 - Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 7: Performance testing of a mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings.
EN ISO 12100:2012 - Safety of machinery - General principles for design - Risk assessment and risk reduction.
EN 60204-1:2018 - Safety of machinery - Electrical equipment of machines - Part 1: General requirements.
EN 60335-1:2012 - Household and similar electrical appliances. Safety. Part 1: General requirements.
EN 60529:1999/A2:2014/AC:2019 - Degrees of protection provided by enclosures (IP code).
EN IEC 61000-6-1:2019-03 - Electromagnetic compatibility (EMC) -- Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments.
LST EN 61000-6-3:2008 - Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.

Should any alterations be made in the products, this declaration will no longer apply.

Quality: SALDA UAB activities are in line with the international quality management system standard **ISO 9001:2015**.

Date 2020-10-23



Giedrius Taujenis
Director product development

12. WARRANTY

1. All equipment manufactured in our factory is checked in operating conditions and tested before delivery. Test protocol is supplied together with the unit. The equipment is shipped in good working condition to the end-client. The unit is warranted for the period of two years from the invoice date.
2. If equipment is found to have been damaged during transportation, a claim should be made against carrier, as we assume no responsibility for such damage.
3. This warranty does not apply:
 - 3.1. when transportation, storage, installation and maintenance instructions of the unit are violated;
 - 3.2. when the equipment is improperly maintained, mounted - inadequate maintenance;
 - 3.3. when the equipment without our knowledge and permission has been upgraded or unskilled repairs were made;
 - 3.4. when the unit was used not for its original purpose.
 - 3.5. Company SALDA UAB is not responsible for potential loss of property or personal injury in cases where AHU is manufactured without a control system and the control system will be installed by the client or third parties. The manufacturer's warranty does not cover devices that will be damaged by installing the control system.
4. This warranty does not apply at these malfunction cases:
 - 4.1. mechanical damage;
 - 4.2. damage caused by entering outside objects, materials, liquids;
 - 4.3. damage caused by natural disaster, accident (voltage change in the electricity network, lightning, etc..).
5. The company assumes no liability for its products either directly or indirectly damage, if the damage is caused by failure to comply with installation and mounting regulations, deliberate or careless users or third-party behavior.

These conditions are readily discernable when the equipment is returned to our factory for inspection.

If the direct client determines that equipment is found to be faulty, or a breakdown occurred, he should inform the manufacturer within five working days and deliver the equipment to manufacturer. Delivery costs should be covered by customer.



Manufacturer reserves the right to change this technical passport any time without prior notice, if some typographic errors or inaccurate information is found, as well as after improving the apps and/or the devices. Such changes will be included in the new issues of the technical passport. All illustrations are just for information and thus may differ from the original device.

12.1. LIMITED WARRANTY COUPON

Warranty term

24 months*

I received complete package and technical manual of the product ready for use. I have read and agreed with the warranty terms and conditions:

.....
Customer's signature

*Refer to the WARRANTY CONDITIONS

Dear User, we appreciate your choice and do hereby guarantee that all ventilation equipment manufactured by our Company is inspected and thoroughly tested. An operational and high-quality product is sold to the direct buyer and shipped from the territory of the factory. It is provided with a 24-month warranty since invoice issue date.

Your opinion is important to us, thus we always look forward to hearing your comments, feedback, or suggestions regarding technical and operational characteristics of the Products.

In order to avoid any misunderstandings, please read the instructions for installation and operation of the product as well as other technical documents of the product carefully. The number of the Limited Warranty Coupon and serial number of the product specified on the silver identification sticker attached to the housing must match.

The Limited Warranty Coupon shall be valid provided that the seller's stamps and records are clear. It is not allowed to change, delete, or rewrite

the data specified on it in any manner – such a coupon shall be invalid.

With this Limited Warranty Coupon the manufacturer confirms one's obligations to implement the imperative requirements established by effective laws on protection of consumer rights in the event of identification of any defects of the products.

The manufacturer reserves the right to refuse provision of free warranty servicing in cases when the warranty conditions listed below are disregarded.

PRODUCT MAINTENANCE TABLE








Product name*		
SERIAL number*		
installation	interval	Date
Fan cleaning	Once per year**	_____
Heat-exchanger cleaning	Once per year**	_____

Filter replacement	Every 3-4 months**	_____

* - Look at the product label.
 ** - At least.

NOTE. The customer shall be required to complete the Product Maintenance Table.

MANUALS IN OTHER LANGUAGES

DE	DK	FR	LT	NL
				
https://select.salda.lt/file/smartyxpde	https://select.salda.lt/file/smartyxpdk	https://select.salda.lt/file/smartyxpfr	https://select.salda.lt/file/smartyxplt	https://select.salda.lt/file/smartyxpln
PL	RU			
				
https://select.salda.lt/file/smartyxppi	https://select.salda.lt/file/smartyxpri			

