SALDA

VALDYMO PULTAS SU SKYSTŲJŲ KRISTALŲ EKRANU
ПУЛЬТ УПРАВЛЕНИЯ С ЭКРАНОМ НА ЖИДКИХ КРИСТАЛЛАХ
CONTROL PANEL WITH THE LIQUID CRYSTAL DISPLAY
STEUERUNGSPULT MIT LCD-BILDSCHIRM FLEX
BOÎTIER DE COMMANDE AVEC ÉCRAN À CRISTAUX LIQUIDES
PANNELLO DI CONTROLLO CON DISPLAY A CRISTALLI LIQUIDI

FLEX

"**Menu**" → "**Advanced**" → "**Service**" additional settings from the controlled recuperator, enter the password **4444**.

1. "**Menu configuration**" – - configuration of the main menu. (Only from V2.3 controller version and description under paragraph 17.1 the selected value -"VerX.3")

    1.1. "**OFF permission**" – possibility to stop the unit.

    1.1.1. "**OFF time**" - {24h - 0h} for what period of time it is possible to turn the unit off according to a chosen season.
    24h – unlimited turn off time, items „OFF season" and „Seasons" are not used.
    Xh – it is possible to turn off for a selected number of hours a day during a selected season.
    Selecting the mode "OFF" backward clock displays when the unit will turn on.
    0h – impossible to turn off during a chosen the season.

    1.1.2. "**OFF season**" - {summer, winter, Always}which season of the year can unit's turn off „OFF permission" function.

    1.2. "**Seasons**"

    1.2.1. "**Switch season**" - choose according to what the seasons are changing.
    3 days mean – according to 3 days average outdoor air temperature, selection in paragraph 1.2.2.
    Calendar – according to a chosen date, selection in paragraph 1.2.2.
    summer – manual turn on of summer season turn on.
    winter– manual turn on of winter season turn on.

    1.2.2. "**Settings**" – winter/summer time settings
    „Outdoor air temp." – (0-20°C) outdoor temperature is set to calculate 3 days average, if the outside air temperature falls below the set value during the course of three days, „OFF permission" function is allowed.
    „summer" – summer season beginning date when „Calendar" is chosen.
    „winter" – winter season beginning date when „Calendar" is chosen.

2. "**PI**" – PI coefficients of the entire system which defines the response to the heating or cooling.

    2.1. "**Kp**" – {1–1000}

    2.2. "**Ki**" – {1–10000}

3. "**Room PI**" – coefficients for work based on the extracted air.

    3.1. "**Kp**" – {1–1000}

    3.2. "**Ki**" – {1–10000}

4. "**HeaPI**" – electric heating coefficients

    4.1. "**Kp**" – {1–1000}

    4.2. "**Ki**" – {1–10000}

5. "**Byp/RotPI**" – coefficients of the bypass valves or rotor

    5.1. "**Kp**" – {1–1000}

    5.2. "**Ki**" – {1–10000}

6. "**ChilPI**" – coefficients of the cooler

    6.1. "**Kp**" – {1–1000}

    6.2. "**Ki**" – {1–10000}

7. "**PreHeatPI**" – coefficients of the preheater

    7.1. "**Kp**" – {1–1000}

    7.2. "**Ki**" – {1–10000}

8. "**NightCtrl**" – - night cooling settings. Function will be active when the set outdoor air temperature limit „Day T" is exceeded for the working unit, and when temperature drops below „Night T" and the room temperature stays above „Room T" after switching the unit off.

    8.1. "**Day T**" – {15–40}°C maximum ambient air temperature

8.2. "**Night T**" - {0-15}°C minimum outdoor air temperature

8.3. "**Room T**" - {10-30}°C indoor air temperature

9. "**Wheat**" - temperature settings of the water heater

9.1. "**W_crit**" – {„Watter stop"+5, 20}°C The limit from which the temperature of the return water is forced to be increased

9.2. "**W_stop**" - {-10 „Watter crit"-5}°C The limit at which fans are stopped

9.3. "**Pump stop**" - {10-30}min. Time after which the water pump is switched off if there is no need for heating

9.4. "**Exercise**" - {0-5}h. The period for preventive start of the water pump „Pump_stop" time

10. "**Act**" – select the basic settings of the unit.
NOTICE! Leaving this paragraph the unit and the controller reloads.

10.1. "**Heater**" – {E_On/Off, E_0_10, E_ESKM, W_VAL+-, W_0_10}
E_On/Off – the electric heater is On/Off controlled using the relay
E_0_10 – the electric heater is controlled using 0–10 V output
E_ESKM – TRIAC control of the electric heater
W_VAL+ - Control of the three-position actuator of the water heater
W_0_10 – Control of the 0–10 V actuator of the water heater

10.2. "**Exch**" – {R_0_10, R_On/Off, B_0_10, B_DMP}
R_0_10 – 0–10V control of the rotor heat exchanger
R_On/Off – On/Off control of the rotor heat exchanger using the relay
B_0_10 – 0–10 V control of the bypass valve of the plate hater exchanger
B_DMP – Control of the three-position bypass valve of the plate heat exchanger

10.3. "**VentUnit**" – {TK, RHEC, RHC}
TK – Supply chamber, section 10.2 is not applicable
RHEC – Recuperator with the heat exchanger control
RHC – Recuperator without the heat exchanger control

10.4. "**Fans Tipe**" – - {EC_0_100, EC, AC}
EC_0_100 -
EC – control of the EC motors using 0–10 V signal
AC – control of the AC motors using three fixed voltages

11. "**PSI.**" – when pressure support is selected, min. and max. limits are set for the pressure converter

11.1. "**min_0V**" – {0ppm–2000} % Pa

11.2. "**max_10V**" – {0ppm–2000} %, Pa

12. "**CO2**" – when CO2 control is selected, min. and max. limits are set for the CO2 converter

12.1. "**min_0V**" – {0ppm–2000} %, ppm

12.2. "**max_10V**" – {0ppm–2000} %, ppm

12.3. "**PPM_100%**" - {20-255}*100ppm

13. "**VentCtrl**" – setting of the indications for fans

13.1. "**SAF**" – {Percent, Pressure} settings for the indications of the supply air motor %, Pa, factory setting (Percent)

13.2. "**EAF**" – {Percent, Pressure, SAF+Pressure} settings for the indications of the extracted air motor %, Pa

13.3. "**SAF+Pressure**" – extracted air motor change differs from the supply only by the set value

13.4. "**CO2**" – {On/Off} extracted air CO2 sensor

13.5. "**ResetToFactorySettings**" – after switching "**OK**", factory settings are saved.
NOTICE! The unit and the controller reloads.

14. "**Misc**" – stop conditions for the unit depending on the connection of the controller

14.1. "**RC NC**" – {On, Off}, factory setting (Off)

On – (Remote Control) No control panel, the unit is stopped

Off – (Remote Control) No control panel, the unit is on
This setting is not applicable if the unit is controlled via ModBus interface

14.2. "**F Timer**" - {On, Off}
On – (Filters timer) filter contamination timer on. Item „Filters" appears on the main menu of the user.
Off – (Filters timer) filter contamination timer off

14.3. "**AX**" - {0, 1}
0 – overheat protection NC
1 – contactor malfunction protection indication

14.4. "**FansOn**" - {On, Off}
On –in case of „AX" protection, fans work at maximum speed

15. "**AF**" - anti-frost security settings

   15.1. "**AF detect**" - {Off, DewP/PlateT, Toutside, Tesetpoint, Klingb, Heatex}for choosing anti-frost security algorithm type.
DewP/PlateT – according to the dew point and the heat exchanger wall temperature calculation algorithm
Toutside – according to outdoor sensor (DIBT)
TEsetpoint – according to exhaust air sensor
Klingb – according to Klinberger (hexagon) heat exchanger anti-frost diagram
Heatex – according to Heatex (quadrangular) heat exchanger anti-frost diagram

   15.2. "**FanReduc.**" - {On, Off} supply fan speed deceleration
On –allowed
Off – forbidden

   15.3. "**Bypp/Rot**" - {On, Off}on activation of anti-frost protection
On –possible to open the bypass valve o to stop the rotor
Off –impossible to open bypass valve or stop the rotor

   15.4. "**PassiveTC**" - {Off, 16,5°C}alarm report supplying low temperature air according to time set in 15.5.

   15.5. "**Excercise**" - {Off, 1-12h}how much time it is possible to supply low temperature air till the alarm report.
Off – only when temperature falls till „PassiveTC" (see.:15.4).

16. "**AF1**" – Anti-frost protection settings
Selecting 15.1. „AF detect" - „DewP/PlateT"

   16.1. "**PlateTemp**" - 1°C – {-5 +10 °C}heat exchanger humidity temperature
Selecting 15.1. „AF detect" - „Toutside"

   16.2. "**OutDoorTemp**"
Selecting 15.1. „AF detect" - „Tesetpoint"

   16.3. "**ExhaustTemp**" - {-20 +15 °C}when exhaust air temperature falls below the set value - anti-frost protection starts according to exhaust air temperature.

   16.4. "**RotorPWM**" – rotor impulse width modulation percentage

   16.5. "**DefrStpTime**" – rotor standing/defrosting time in minutes

   16.6. "**PassiveTemp**" – outdoor air temperature value, in case of exceeding which, anti-frost function is allowed.

17. "**CONF1**" - (only from V2.3 controllers' versions)

   17.1. "**CONF1**" - {„Ver X.2", "Ver X.3"}
"Ver X.3" – for turning on „DIBT" and „Passive house" functions
It is possible to choose „Building protection" unit's working mode,
No speed choice „Stop", (at „Schedules" as well)
Necessary to set „Menu" → „Extra" → "Service" → "Menu configuration"
Necessary to set „Menu" → „Menu configuration" → „Economic temper."

   17.2. "**3dayRH mean**" –for setting three-day humidity average %

   17.3. "**3dayRHCurr**" – three-day average of humidity %

   17.4 "**3dayOUTCurr**" - three-day average of outdoor air °C

    17.5 "**St/Sp time**" - External timer delay time for unit's switch to another mode.

18. "**CONF2**" - (for controllers with V2.4.1. and higher)

    18.1. "**Old RC compatib**" - {*On", „Off"} – compatibility with older remote controllers.
„On" – the controller works with UNI, PRO, TPC and FLEX remote controllers but doesn't support extended ModBus address list.
„Off" – controller works with FLEX remote controller and supports extended ModBus address list.

    18.2. "**empty1**" - unused

    18.3. "**empty2**" - unused

    18.4. "**empty4**" - unused

    18.5. "**empty5**" - unused

EN Air quality parameters control based on the CO_2 converter.

1. Connect 0-10V control signal wire of the CO_2 converter to the analog input T.SET of the control board (X16 „transmitter2"). Converter power supply (24VDC) wire is connected to the board output +24 and neutral (0V) wire to the COM contact (X16 „transmitter2").
2. Configure the control board using the FLEX panel:
2.1. On the panel, select Menu → Additional → Service (enter password 4444) → Vent. Control. Change the value of the parameter „CO_2" to „On".
2.2. On the panel, select Menu → Additional → Service → CO_2. In accordance with parameters of the CO_2 converter, select the CO_2 level (using ppm units), which will be indicated at 0V threshold (parameter min_0V), and the level, which will be indicated at 10V (parameter max_10V).
2.3. On the panel, select Menu → Additional → Service → CO_2. Select the level above which, when allowable level of CO_2 is exceeded, the fans will operate at maximum speed (parameter PPM_100%).
2.4. On the panel, select Menu → Additional → Add.Func. Set the maximum allowable level of CO_2 above which the supply air flow is increased (parameter CO_2).
3. On the panel, in the menu Sensor overview you can see instantaneous exhaust CO_2 value.
4. When allowable set CO_2 level is exceeded, the information message High CO_2 level is displayed at the initial screen and the speed of fans is increased based on the amount at which allowable level is exceeded.
5. In case of any fault of the CO_2 converter, menu Emergency overview shows message CO_2 sensor. Check if CO_2 converter is properly connected (only current input).

System control based on the supply and exhaust air pressure converters

1. Connect 0-10V control signal wire of the supply air pressure converter to the analog input FAN of the control board, connect 0-10V control signal wire of the exhaust air pressure converter to the analogous input T.SET of the control board (X16 „Transmitter1", „Transmitter2"). Converter power supply (24VDC) wire is connected to the board output +24 and neutral (0V) wire to the COM contact (X16 „Transmitter1", „Transmitter2").
2. Configure the control board using the FLEX panel:
2.1. On the panel, select Menu → Additional → Service (enter password 4444) → Vent. Control. Change the value of the parameter SAF to Pressure. Change the value of the parameter EAF to Pressure.
2.2. On the panel, select Menu → Additional → Service → PSI. In accordance with the parameters of the pressure converter, select the minimum threshold 0V (parameter min_0V) and the maximum threshold 10V (parameter max_10V).
2.3. On the panel, select Menu → Additional → SAF Ctrl. Set the supply air fan speeds in accordance with the pressure.
2.4. On the panel, select Menu → Additional → EAF Ctrl. Set the exhaust air fan speed in accordance with the pressure.
3. On the panel, in the menu Sensor overview, you can see instantaneous supply and exhaust air pressure values.
4. In case of any fault of the pressure converter, menu Emergency overview shows message GP sensor. Check if pressure converters are properly connected (only current input).