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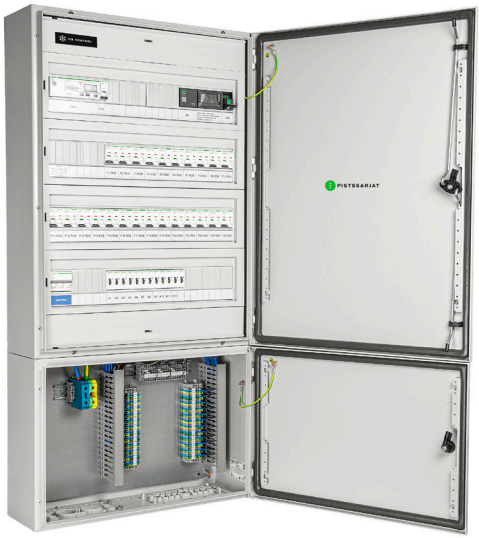

IceControl V2.15

Trace heating control unit

Product information and user manual

IceControl V2.15

General information

IceControl ® V2.15 – A smart trace heating system with connectivity at its core

IceControl ® V2.15 is the smartest and most reliable trace heating system on the market, integrating seamlessly into property automation. The control unit supports common bus protocols such as Ethernet and Modbus, enabling integration with the property's own monitoring and management systems.

The system detects freezing conditions and controls the heating elements in an optimised way, thereby saving energy and improving safety. The user can also control the system remotely using the web interface, and alarms can be sent to an email or bus.

Key features:

- Extensive connectivity: Modbus, Ethernet
- Remote control and web use:
- Timer programs for scheduling heating and cleaning
- Temperature thresholds can be adjusted by zone
- Upgradable software and energy metering (optional accessory)
- The IceControl V2.15 combines intelligence, cost-effectiveness and safety, integrating seamlessly into property automation systems.
- The unit can be connected to 1-3 measurement sensors.
- The unit can be used to control 1-3 heating zones.
- The sensor contains a heating element that is used to determine the amount of snow or ice.
- A single zone can have a maximum of 3 sensors and 3 trace heating control circuits.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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General information

Control mode options:

Vapaa
The zones operate independently and can be on at the same time. A zone must have at least 1 output and 1 sensor. There can also be 1 sensor and 3 controls, in which case one sensor controls 3 outputs per zone.

V ant
The zones operate in an alternating sequence, and measurements are taken using only the sensors (1-3 sensors) in zone 1. The heating time for all areas is determined based on the sensor in zone 1. Zones that are assigned to the thermostat are included in the alternating sequence. In the zone configuration, zone 1 requires at least one sensor, and control is enabled in zones 1–3 (Control=1). Only one zone is active at once in the system.

V mon
The zones operate in an alternating sequence, but each zone uses its own sensor(s) (1-3 sensors). If a zone is assigned to a thermostat, it will also alternate.

Prio
The zones operate in an alternating sequence according to priority and use their own sensors (1–3 sensors/zone). Zone 1 is the highest priority and zone 3 is the lowest priority. Permission to heat is only granted if the higher priority is not heating and the sensor in the zone in question requests heating. A zone with higher priority will always override and suspend the heating of a lower-priority zone. Zones assigned to thermostats follow the same order of priority.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Technical specifications

Product	IceControl trace heating control unit					
Connectivity	Ethernet, Modbus TCP, Modbus RTU					
Ports	Ethernet, USB, MicroSD					
Fuse, control 10A	1					
Energy consumption measurement***	Yes					
Compatible sensors	ETOG-55, ETOR-55					
Operating temperature	-20... +65 °C					
Type	IC-3	IC-9	IC-18	IC-27	IC-42	IC-72
Main switch (rated current)	40A (1-nap)	32A	32A	63A	63A	125A
Number of contactors	1	3	3	5	7	12
RCBO*	1	3	6	9	14	24
Control switch I-O-II	1	1	2	3	4	8
Maximum output, kW (N-L)**	3	9	17	27	36	72
Supply conductor terminal block size	2,5 mm^2	10 mm^2	10 mm^2	35 mm^2	35 mm^2	50 mm^2
Load terminal block size	2,5 mm^2	2,5 mm^2	2,5 mm^2	2,5 mm^2	2,5 mm^2	2,5 mm^2
Enclosure class	IP 65	IP 66	IP 66	IP 66	IP 66	IP 66
Dimensions (mm)	340 x 460 x 160 (plastic)	400 x 600 x 200	400 x 600 x 200	600 x 800 x 200	800 x 600 x 200	600 x 1200 x 200
Cable entry	4 x M20 / 2 x M25	Gland				
Mounting	Screw mounted	Wall brackets (incl. pack.)				

* Combination 2C16 30mA A
** Also available separately with a 400V (L-L) connection
*** Energy consumption measurements are implemented in basic control units by calculating power x/time. A separate energy consumption meter is available as an additional accessory. (Pulse/Modbus).

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

IceControl V2.15

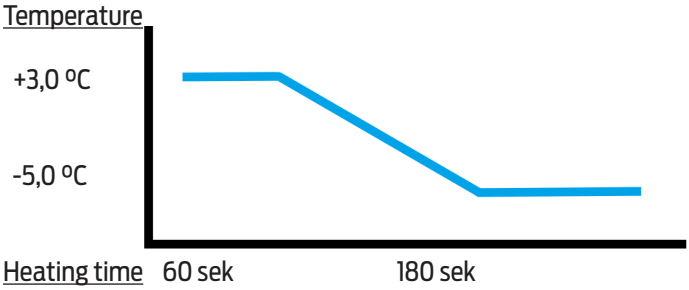
Use

Sensor heating and moisture measurement

Sensor heating is activated based on the measured outdoor temperature.

Sensor heating will not activate if the outdoor temperature is outside of the specified range. For example, if the outdoor temperature is above +3ºC or below -15ºC (the default settings), sensor heating is not required, as these values usually indicate either wet weather or dry freezing conditions.

The sensor-heating interval is determined according to the outdoor temperature using a two-point control curve. All setpoints on the control curve can be adjusted.



- Sensor heating is activated during the intervals between the heating cycles of the trace heated zone.
- A cooling coefficient determines the sensor's cooling period between sensor heating intervals.
- If, based on the outdoor temperature, a sensor's heating time is 60 sec and the set cooling coefficient is 2.0, the cooling period is 2 x 60 = 120 sec.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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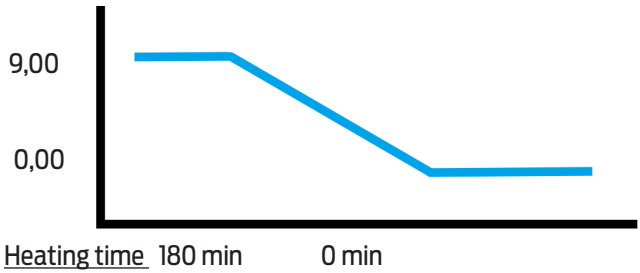
Use

Zone heating time



- Sensor heating is not active when the zone is being heated.
- If a sensor detects moisture after a heating cycle, trace heating for that zone will be restarted. If there are multiple controls in a zone, the controls will activate after a configurable delay (default 30 sec).
- If there are multiple sensors in a trace heated zone, the heating time is calculated in accordance with the highest moisture.
- Sensors and zones can be assigned names (max. 20 characters).
- Trace heating can be activated manually and will automatically turn off after a set time (default 120 min).
- If "**termostaatti** (thermostat)" is selected as the zone's "**Ohjaustapa** (Control mode)", then moisture will not be measured, and heating will always be activated whenever the outdoor temperature falls within the set range (default + 3ºC ... -15ºC). This is not the recommended control mode.

IceControl V2.15

Use

Moisture measurement

The sensitivity of moisture measurement can be adjusted.

The upper sensitivity limit determines the maximum permitted moisture level (default 1 kΩ), the moisture reading will display 9.00.

The lower sensitivity limit determines the lowest permitted moisture level (default 100 kΩ), the moisture reading will display 0.00.

The minimum moisture setting is the threshold that the moisture level must exceed to allow trace heating (default 3.00). Moisture is only measured during sensor heating

Energy measurement (optional)

If the system is equipped with an energy meter, an electricity-demand alarm or a controller fault alarm can be triggered when necessary.

An electricity-demand alarm will sound if the measured power is lower than the set value when trace heating is on (default 50% of the given power). A controller fault alarm will sound if the power is higher than 0.5kW when the heating is off.

The total energy value from the energy meter can be transferred to a monitoring system, where it is possible to calculate various energy consumption values. The accuracy of the calculations depends on the intervals between readings. A bus-based meter's current and voltage data can be transferred to the monitoring system, where it is possible to calculate the instantaneous power. An energy meter is connected to the controller using a modbus bus or as a pulse output.

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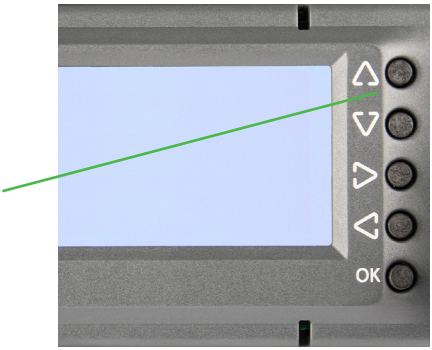
Use

Buttons

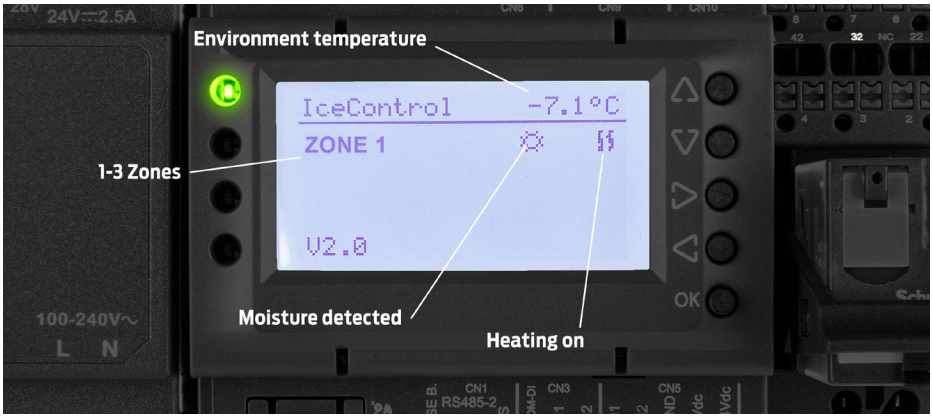


Change field: Up and down arrows
Return from screen: Left arrow button
Accept selection: OK button

Changing setpoints

Choose the field you wish to change and then press the OK button.
Use the right or left arrow buttons to navigate to the desired number and change the value using the up or down arrow buttons or hold down the up or down arrow to scroll through the numbers. Accept the change by pressing the OK button. Fields with a border are manually input setpoints. Fields without a border are measured values.

The basic display in normal use



PISTESARJAT

Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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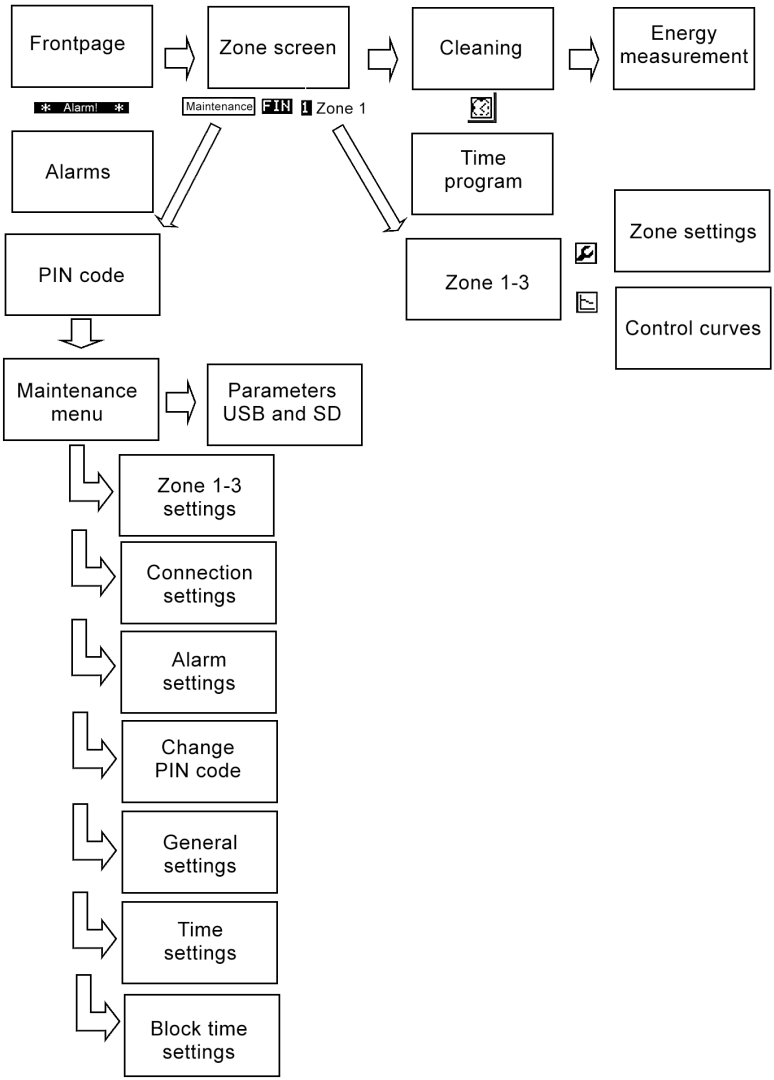
Use

Page menu



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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

Alarms

Continuous moisture

- If a sensor shows moisture for longer than a set time, a moisture alarm will activate.
- The setting is given in hours (default 100h).

Moisture measurement sensor error

- If the measurement sensor's measurement falls below the permitted measurement range (default 1 k Ω), a sensor error alarm will sound (delay default 24h).
- Zone and sensor heating will not be permitted; the moisture meter will display 0.

Temperature measurement sensor error

- If the temperature of the sensor falls outside of the permitted measurement range, a sensor error alarm will sound. (-50... +70ºC)
- Zone and sensor heating will not be permitted.

Annual maintenance alarm

- The unit will sound an alarm when annual maintenance is required.

Manual operation alarm

- If manual operation has been on for longer than 24h Electricity demand and controller error alarms (see energy meter).

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

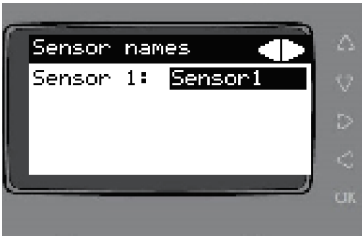
Initial setup

When launching for the first time, a guided installation will open. All settings can be adjusted later on.

- **Selection: GRND** (ground) or **ROOF**
- **Name:** e.g. **loading platform**, max. 20 characters).
- **Number of sensors:** Set the number of sensors (1-3).
- **Number of circuits:** Set the number of heating circuits (1-3).

The number of sensors and trace heating circuits available for the next zone is the maximum number minus the number selected for the previous zone. For **Zone 1** select the zone with the largest number of heating circuits.

Finish by pressing the right arrow.



- **Sensor:** Enter the names of the sensors (e.g. door, max. 20 characters).

Finish by pressing the right arrow. Repeat for all zones.

Once you have gone through all of the zones, select "**Ok**", press the OK button.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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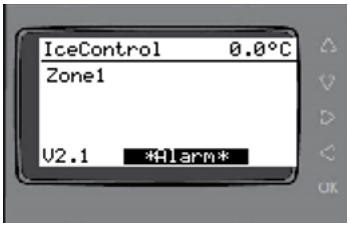
Use



The front page displays the outdoor temperature and zone status.

If a measurement sensor detects the need for heating, a snowflake icon will appear on the screen.

When trace heating is activated, a heating icon will appear on the screen.

If the unit has an active alarm, the *Alarm* button will appear. Use the right arrow button to go to the zone screen.

The alarm screen shows the active alarms, alarm time-stamp, and alarm name.
The alarm will automatically stop once the cause of the alarm is removed.

Alarms are explained in the section “Alarms”.

From the zone screen, you can navigate to zone measurements and control, the maintenance menu, and language selection.

Use the right arrow button to go to the cleaning screen.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

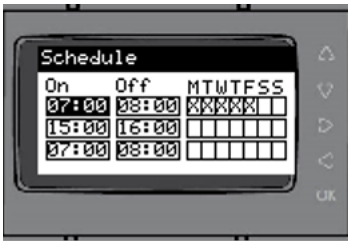
Cleaning

Cleaning is a function with which heating can be activated using a time program and in the desired temperature zone.

Cleaning can be used in places such as the area outside a store door to ensure that there is no snow or ice in that area when the store opens.

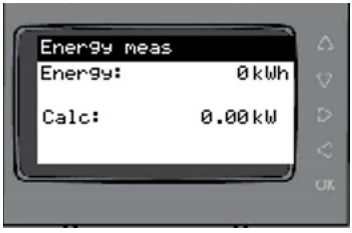
Use the right arrow button to go to the energy meter screen.

Time program settings for cleaning



There are 3 time channels. Set the desired trace heating time and choose the days on which trace heating is used.

Energy meter



If there is no energy meter, energy will be calculated based on the set power. If an energy meter is connected, the readings from the energy meter will be used.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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Use

Zone screen

Zone

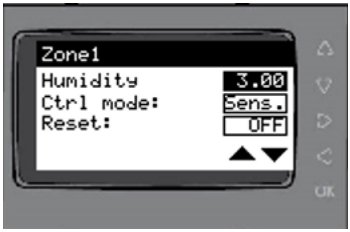
The zone screen shows the sensor temperature and moisture measurement.

If there is an asterisk after the moisture measurement, sensor heating is activated. Heating can be activated manually. In this case, the timer tracks the time that manual mode is on. Manual operation will automatically stop once the preset time is up. The time can be set in the maintenance menu.

The heating active indicator (On – Off) and time in hours that heating has been active.

Opens senttings

Opens control curves



Zone settings

Humidity: is the setting that moisture must exceed in order for heating control to turn on.

Ctrl mode: is the setting that activates heating whenever the temperature allows.

Reset: resets the heating hourly timer.

- Set this to “ON”, and after resetting, the setting will automatically change back to the “OFF” status.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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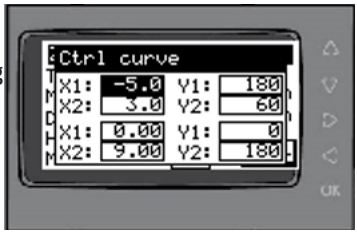
Use

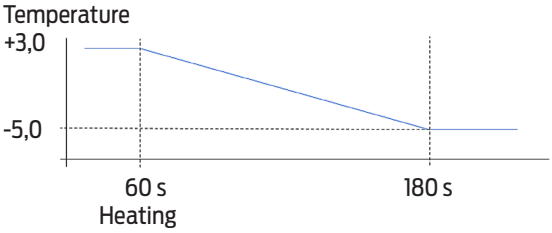
Control curves

The upper control curve is used to select the sensor heating time based on the temperature measured by the outdoor temperature sensor. The time is adjusted in seconds.



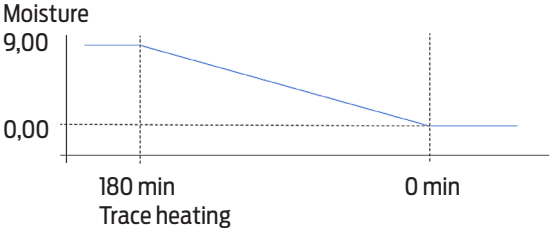
Control curves

X1=Lowest temperature ºC **Y1**=Longest time s.
X2=Highest temperature ºC **Y2**=Shortest time s.



The lower control curve is used to select the heating time for the heated zone based on the measured moisture. The time is adjusted in minutes.

X1=Lowest moisture reading **Y1**=Shortest heating time min.
X2=Highest moisture reading **Y2**=Longest heating time min.



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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

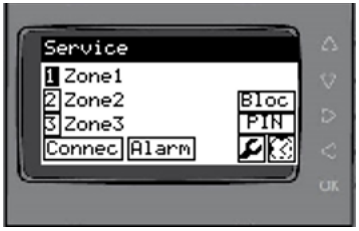
PIN code request

The maintenance menu settings are intended only for persons familiar with the system operation. The incorrect settings may cause the unit to stop functioning or to function incorrectly!

Enter the correct PIN code (default **0000**), select “Ok”, press the OK button.

From the service menu, you can navigate to zone settings

The ”**Connec**” button opens the TCP/IP and RTU settings.



Service menu

The ”**Alarm**” button opens the alarm settings.

The ”**Bloc**” button opens the time program for blocking zone heating.

The ”**PIN**” painikkeesta avautuu PIN-koodin vaihto.

Opens system settings

Opens time settings

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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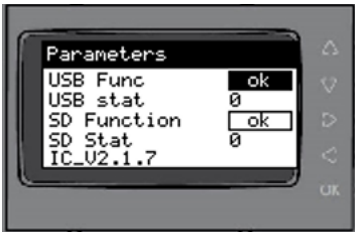
Use

It is possible to save or read all unit parameters on a USB stick.



Parameters screen

USB function
- Ok - The USB stick can be connected or removed
- Read - Read parameters from the USB stick
- Write - Write parameters onto the USB stick

USB status
- 0 - No function
- 1 - Reading of writing in progress

The unit will save measurement data onto an SD memory card if the function is enabled.

SD function
- Ok - No operation
- mount - Insert a memory card
- unmou - Remove a memory card

SD status
- 0 - No function
- 1 - Reading or writing in progress

Zone settings

- Sensor selection (**GRND** tai **ROOF**)
- Number of sensors (**1-3**)
- Zone control, numer of heating circuits (**1-3**)

Zone settings page 1/3

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02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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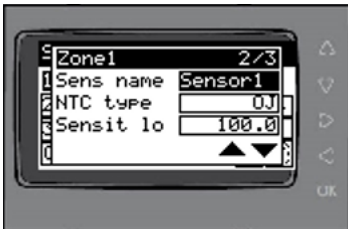
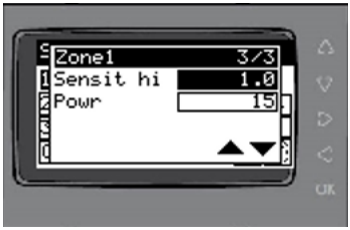


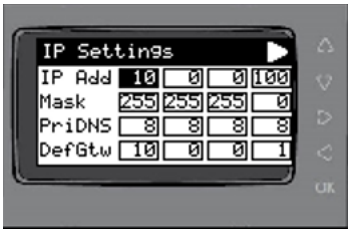
Zone settings page 2/3

- **Sensor name:** (e.g. door, max. 20 characters)
- **Sensor type:** (PST, EBL, OJ)
- **Sensitivity (lower limit):** the lower sensitivity limit determines the lowest permitted moisture level (default 100 kΩ), the moisture reading will display 0.00



Zone settings page 3/3

- **Sensitivity (upper limit):** the upper sensitivity limit determines the maximum permitted moisture level (default 1 kΩ), the moisture reading will display 9.00.
- **Power:** Zone power, kW



IP settings

Connection settings

The unit can be connected via Modbus TCP/IP to e.g. a cloud-based service. The unit's internal web interface is accessed via an Ethernet network. Email alarms are sent via the Internet.

- **IP Add:** IP osoite
- **Mask**: Subnet mask
- **PriDNS:** The primary DNS address, required for email alarms
- **DefGtw**: Default gateway

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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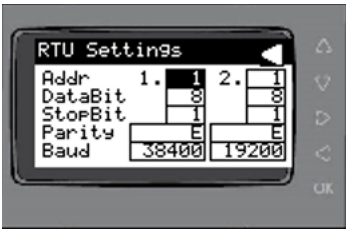
Use

RTU porttien asetukset

- **Addr:** 1. The port is reserved for remote monitoring and is in Slave mode. 2. The port is reserved for the bus-connected energy meter and is in Master mode.
- **Parity:** = **E** (Even), **O** (Odd), **N** (None)



RTU settings

Alarm settings

The unit can be used to send alarms by email.

The unit must be connected to the Internet and the network settings must be configured.

Alarm settings

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

Alarm setup

Select "**Email enable**" ON, if alarms are sent by email

Opens the time program

Prio Opens alarm priorities

DNS srch = shows DNS lookup status
- Idle = no lookup
- Start = Start lookup
- Search = Searching
- Search ok = Search successful
- Timeout = No response within the search time
- Error = Lookup error
- Not Found = Not found

Send = shows the status of an email delivery
- Idle = not sending
- Start = Start sending
- No File = No file found
- Sending = Sending in progress
- Send ok = Email sent successfully
- Timeout = Not sent within sending time
- Error = Sending error

Test = sending a test alarm
- ON = sends an "active" message
- OFF = sends an "inactive" message

Schedule

The time program is used to determine when priority 2 alarms are sent.

If an alarm occurs outside of the time program, the alarm will be sent once the time program is activated.

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
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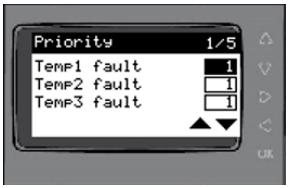
Use

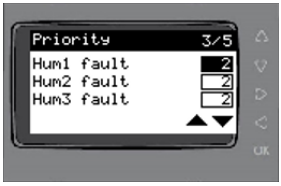
Email alarms are sent in accordance with alarm priorities.

- **0 = No alarm sent**
- **1 = Alarm always sent (24/7)**
- **2 = Alarm sent according to time program**

There are 5 pages of alarm priorities.

- Temperature error 1, 2 and 3
- Constant humidity 1, 2 and 3
- Humidity error 1, 2 and 3
- Outdoor temperature error
- Electricity demand alarm
- Manual operation
- Annual maintenance
- Controller error





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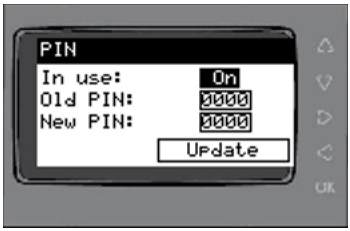
Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

IceControl V2.15

Use



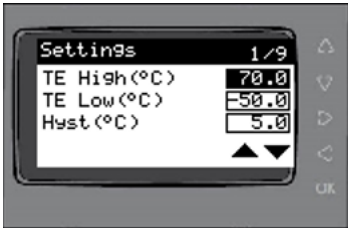
PIN

PIN code settings

Under Käytössä (In use), choose whether the PIN code is in use (default On)

Changing the PIN code

- Enter the old PIN code
- Enter a new PIN code
- Select **Update** and then press the **OK** button.



System settings page 1/9

System settings

- **TE High:** This setting defines the highest permitted temperature measurement
- **TE Low:** This setting defines the lowest permitted temperature measurement
- **Hyst:** This setting defines how much the temperature measurement needs to change before the alarm is cleared.

If the temperature reading falls outside of the set range, a sensor error alarm will be triggered.

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FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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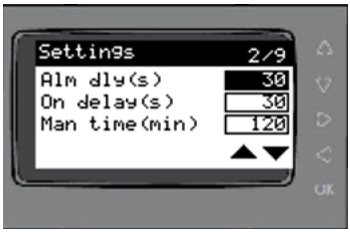
Use

- **Alm dly:** This is the alarm delay for faults, in seconds.
- **On delay:** This is the switching delay between the Zone's different circuits, in seconds.
- **Man time:** This is the time that manual operation has been on, in minutes.



System settings page 2/9

- **Humid flt:** This is the constant humidity alarm time, in hours.
- **Cool coef:** This defines the relationship between sensor heating and cooling
- **Energy meas:** Off, Pulss, Bus

- **Off** = no energy meter
- **Pulss** = Energy meter with pulse output
- **Bus** = Energy meter with Modbus RTU bus

System settings page 3/9

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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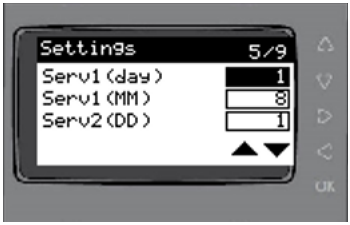
IceControl V2.15

Use

System settings page 4/9

If "Pulss" is selected, the following will be displayed:

- **EM01 Alarm:** Electricity-demand alarms, including with bus meter
- **Pulse ratio:** The energy meter's pulse ratio, only applies to pulse-output meter
- **Temp unit:** (ºC or ºF).



System settings page 5/9

- **Serv1 (dd):** Maintenance notice 1 day
- **Serv1, (mm):** Maintenance notice 1 month
- **Serv2, (dd):** Maintenance notice 2 day

System settings page 6/9

- **Serv2, (mm):** Maintenance notice 2 month
- **Man alm time(h):** The delay time of the manual operation alarm, in hours
- **Pwr dly/s**: The alarm delay of the electricity demand alarm, in seconds

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi

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Use

- **Factory settings:** This takes you to the initial setup function
- **Outdoor temperature:** This must always be selected. It cannot be changed
- **Control mode:** Select between 4 different control modes

System settings page 6/9

- **1. Vapaa**
- **2. V ant**
- **3. V mon**
- **4. Prio**

1. Vapaa

The zones operate independently and can be on at the same time. A zone must have at least 1 output and 1 sensor. There can also be 1 sensor and 3 controls, as one sensor controls 3 outputs/zones.

Zone1:
- Sensor=1
- Control=3

It can also be as follows:

Zone1:
- Sensor=2
- Control=1

Alue2:
- Sensor=1
- Control=2

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02940 Espoo
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myynti@pistesarjat.fi
tel. 010 423 8770
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IceControl V2.15

Use

System settings page 7/9

In this case, the maximum moisture value from Zone1 sensors is used to control the heating of Zone1.

In this case, the Zone2 sensor controls the heating of Control2 and Control3.

Another option is:

Zone1:
- Sensor=1
- Control=1

Zone2:
- Sensor=2
- Control=2

In this case, the Zone1 sensor controls the heating of Control1.

In this case, the Zone2 sensors control the heating of Control2 and Control3.

Another option is:

Zone1:
- Sensor=1
- Control=1

Zone2:
- Sensor=0
- Ohjaus=0

Zone3:
- Sensor=1
- Control=2

In this case, the Zone1 sensor controls the heating of Control1.

In this case, the Zone3 sensors control the heating of Control2 and Control3.

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02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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IceControl V2.15

Use

2. V ant

System settings page 7/9

The zones operate in an alternating sequence, only the zone1 sensors (1-3 sensors) are used.

All zones receive a zone heating time from the zone1 sensor.

If a zone is assigned to a thermostat, it will also alternate.

The zones can be allocated for use as in the example below:

Zone1:
- Minimum of 1 sensor
- Control=1

Zone2:
- Sensor=0
- Control=1

Zone3:
- Sensor=0
- Control=1

In this case, zones alternate and only one zone is on at a time.

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myynti@pistesarjat.fi
tel. 010 423 8770
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Use

System settings page 7/9

3. V mon

The zones operate in an alternating sequence, but each zone uses its own sensor(s) (1-3 sensors).

If a zone is assigned to a thermostat, it will also alternate.

System settings page 7/9

4. Prio

The zones operate in an alternating sequence according to an order of priority, and each zone uses its own sensor (1-3 sensors).

Zone1 has the highest priority. Zone3 has the lowest priority.

Zone2 can be granted heating permission if Zone1 is not heating and the Zone2 sensor indicates demand for heating.

Zone3 can be granted heating permission if Zone1 and Zone2 are not heating and the Zone3 sensor indicates demand for heating.

If, for example, Zone1 requires heating and Zone2 or Zone3 are heating, these will be overridden and suspended, and Zone1 will begin heating.

Correspondingly, Zone2 can override Zone3. If a zone is assigned to a thermostat, this will also alternate according to priority.

IceControl V2.15

Use

Upper and lower heating limits

Each zone (**1, 2** and **3**) has individually configurable upper (**HiLim**) and lower (**LoLim**) temperature limits, and the system will operate within this range.

By default, the limits are:

- **T allow HiLim:** +3ºC
- **T allow LoLim:** -15ºC

System settings page 8/9

System settings page 9/9

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IceControl V2.15

Use

Time

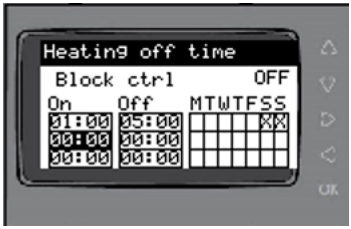
Time settings

Set the unit's time and date in the time settings.

Set the correct time, weekday, and date. To finish, select the **Update** icon and press the "**OK**" button.

The function will close the time update window.

If you wish for the time to automatically switch to summer time, select **DST active** in use.



Prevent zone heating

Prevent zone heating

For example, zone heating would be prevented on Saturdays and Sundays between 1.00am and 5.00am.

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myynti@pistesarjat.fi
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www.pistesarjat.fi

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Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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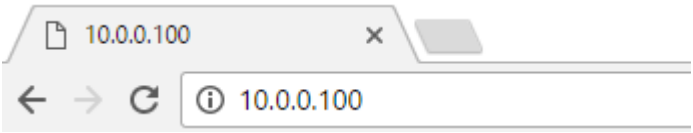
IceControl V2.15

Use/WEB

Using the WEB page

Enter the unit's IP address in the browser bar (default address 10.0.0.100).



Then log in.

Enter the username and password (IceControl and 200), and then click "Log in".

Remember to save the username and password so that the browser remembers your password in the future.

IP address and last updated time in the top bar

The user interface has a clear tree-structured menu.

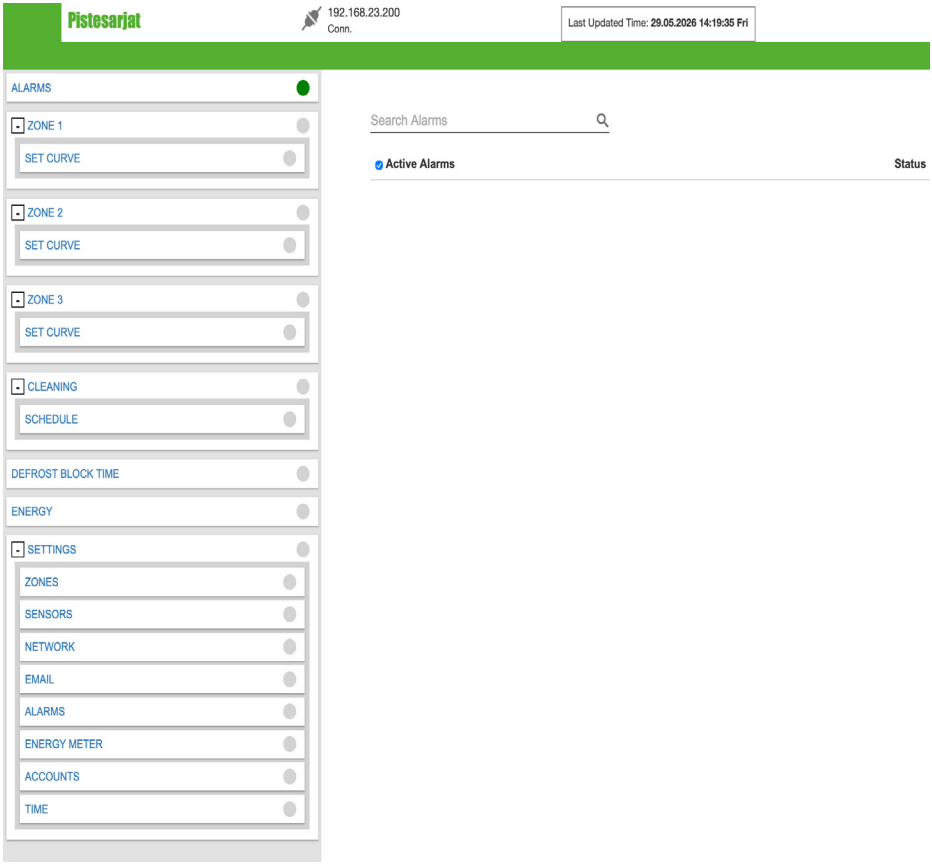
- The WEB user interface has the same settings as the control panel.
- The WEB user interface shows all setting values and measurements, even if they are not in use.

The green circle indicates which page is open.

IceControl V2.15

Use/WEB

Front page



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02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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IceControl V2.15

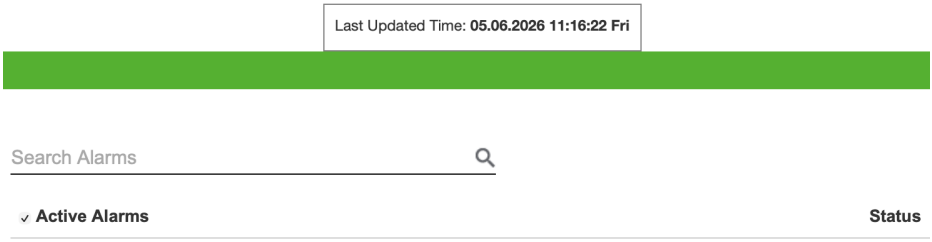
Use/WEB

WEB – Alarms

By selecting Active alarms, you can filter to show only active alarms (active by default).

If you show all alarms, the timestamp will display when the alarm was cleared.

Under Search alarms, you can search the list for alarms by name. The title is the site address.



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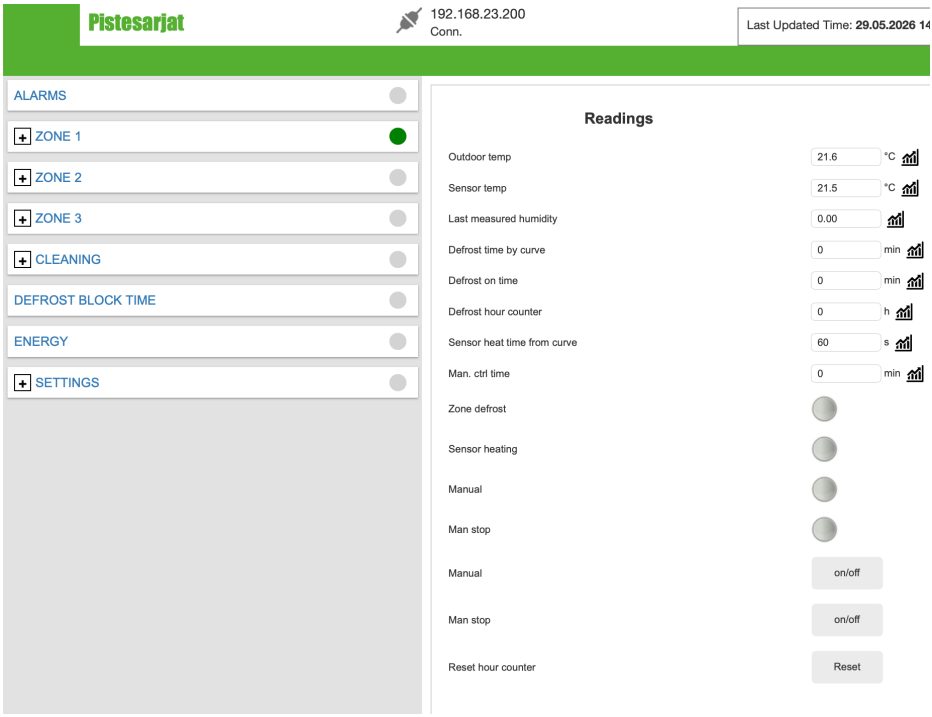
Use/WEB

WEB – Zone 1 (Zone 2 and Zone 3)

The screen shows zone measurements, heating times, manual operation, and counters.



Click the icon to go to the meter trend view

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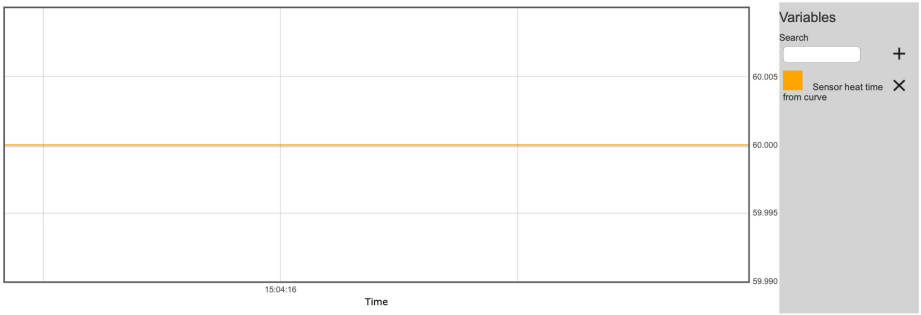
Use/WEB

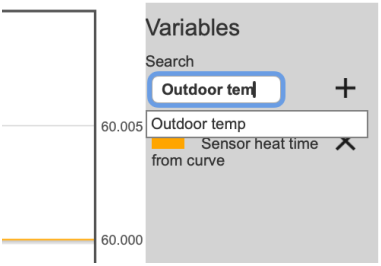
Adding a measurement to the trend view



Start to enter the name of the measurementin the

”Search” field, and options will appear.

Select the desired measurement and then click + to add the measurement to the trend



WEB – Zone 1 settings (Zone 2 and Zone 3)

Click the cog icon to open

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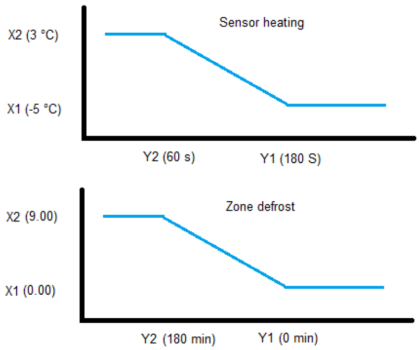
Use/WEB



Readings

Sensor heat time from curve	60 s
Defrost curve time	0 min
Measured humid.	0.00
X1: Sensor temp	-5.0
X2: Sensor temp	3.0
Y1: Sensor heat time	180
Y2: Sensor heat time	60
X1: Meas. humidity	0.00
X2: Meas. humidity	9.00
Y1: Defr. time	0
Y2: Defr. time	180

CLEANING

Name	Val.	Unit
Temp high limit	3.0	°C
Temp low limit	-3.0	°C
Ctrl	Off On	
Schedule	Off On	

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Use/WEB

Cleaning settings

Name	Val.	Unit
Start time 1	07:00	hh:mm
End time 1	08:00	hh:mm
Cleaning on 1	✓	Mo
Cleaning on 1	✓	Tu
Cleaning on 1	✓	We
Cleaning on 1	✓	Th
Cleaning on 1	✓	Fr
Cleaning on 1	☐	Sa
Cleaning on 1	☐	Su
Start time 2	15:00	hh:mm
End time 2	16:00	hh:mm
Cleaning on 2	☐	Mo
Cleaning on 2	☐	Tu
Cleaning on 2	☐	We
Cleaning on 2	☐	Th
Cleaning on 2	☐	Fr
Cleaning on 2	☐	Sa
Cleaning on 2	☐	Su
Start time 3	07:00	hh:mm
End time 3	08:00	hh:mm
Cleaning on 3	☐	Mo
Cleaning on 3	☐	Tu
Cleaning on 3	☐	We
Cleaning on 3	☐	Th
Cleaning on 3	☐	Fr
Cleaning on 3	☐	Sa
Cleaning on 3	☐	Su

IceControl V2.15

Use/WEB

Energy settings

ENERGY

Name	Val.	Unit
Energy	0	kWh
Voltage L1	0	V
Voltage L2	0	V
Voltage L3	0	V
Current L1	0.0	I
Current L2	0.0	I
Current L3	0.0	I
Instant power	0.0	kW
Reactive	0.0	kVAR
Apparent power	0.0	kVA
Power factor	0.00	

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Use/WEB

Settings

Defrost controls

Name	Val.	Unit
Control mode	Free ctrl	
Control start delay	30	s
Manual control on-time	120	min
Manual alarm limit	24	h
Zone1 outdoor temp defr high lim	3.0	°C
Zone1 outdoor temp defr low lim	-15.0	°C
Zone2 outdoor temp defr high lim	3.0	°C
Zone2 outdoor temp defr low lim	-15.0	°C
Zone3 outdoor temp defr high lim	3.0	°C
Zone3 outdoor temp defr low lim	-15.0	°C

Service reminder

Name	Val.	Unit
Service 1 day	1	pp
Service 1 month	8	kk
Service 2 day	1	pp
Service 2 month	9	kk

Versioning

Name	Val.	Unit
Main ver.	V2.1	
Sub ver.	IC_V2.1.7	

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myynti@pistesarjat.fi
tel. 010 423 8770
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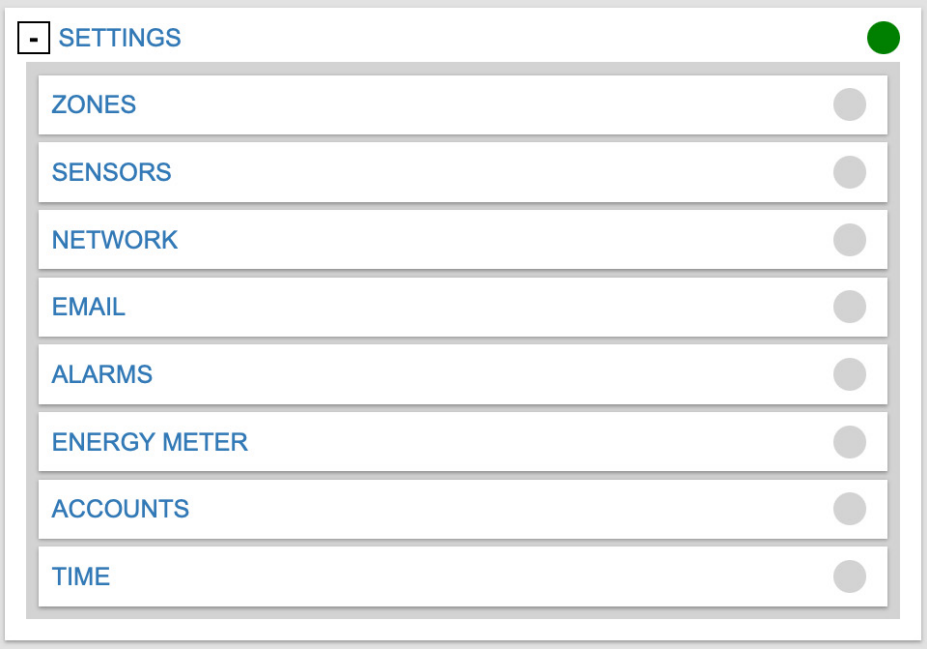
Use/WEB

Settings subpages



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02940 Espoo
FINLAND

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tel. 010 423 8770
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Use/WEB

Zones (Zone 1, Zone 2 ja Zone 3)

Name	Val.
Zone 1:Humidity defr limit	3.00
Zone 1:Ctrl mode	(•) Sensor ( ) Thermostat
Zone 1:Runtime counter reset	(•) Off ( ) On
Zone 1:Defrost selection	Gnd
Zone 1:Number of sensors	1
Zone 1:Number of controls	1
Zone 1:Name	Alue1
Zone1:Power	1.5

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02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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Use/WEB

Sersors (Sensor 1, Sensor 2 and Sensor 3)

Name	Val.
Cooling factor	2.0
Sensor 1:Temp	21.8
Sensor 1:Hum.	0.00
Sensor 1:Name	Anturi1
Sensor 1:Type	OJ
Sensor 1:Sens. low limit	100.0
Sensor 1:Sens. high limit	1.0

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02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
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IceControl V2.15

Use/WEB

Network

Net settings

Name	Val.	Unit
IP addr. 1	192	num
IP addr. 2	168	num
IP addr. 3	23	num
IP addr. 4	200	num
Netmask 1	255	num
Netmask 2	255	num
Netmask 3	255	num
Netmask 4	0	num
Default gateway 1	10	num
Default gateway 2	0	num
Default gateway 3	0	num
Default gateway 4	1	num
Primary DNS server 1	8	num
Primary DNS server 2	8	num
Primary DNS server 3	8	num
Primary DNS server 4	8	num

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Use/WEB

Email

Send settings

Name	Val.	Unit
Sender email address	nimi.niminen@email.com	
Recipient	nimi.niminen@email.com	
Target address	Testikatu 10	
Email sending	☐	
DNS look	◉ Idle ○ Start ○ Searc ○ Searc ok ○ Timeout ○ Error ○ No Found	
Alarm sending	◉ Idle ○ Start ○ No file ○ Sending ○ Send ok ○ Timeout ○ Error	

Acct settings

Name	Val.	Unit
Port number	25	
Server name	smtp.email.com	
User	nimi.niminen@email.com	
Password	Salasana	

2nd Priority schedule

Name	Val.	Unit
Start time	7	hh
Start time	0	mm
End time	16	hh
End time	0	mm
Sending on	☑	Mo
Sending on	☑	Tu
Sending on	☑	We
Sending on	☑	Th
Sending on	☑	Fr
Sending on	☐	Sa
Sending on	☐	Su

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Use/WEB

Alarms

Temp measurements

Name	Val.	Unit
Fault alarm high	70.0	°C
Fault alarm low lim	-50.0	°C
Fault alarm hysteresis	5.0	°C
Alarm delay	30	s
Outdoor temp in use	○Off ●On	
Outdoor temp unit	°C ⇕	

Humidity readings

Name	Val.	Unit
Humidity alarm delay	100	h

Alarm priorities

Name	Val.	Unit
Sens 1 fault	1	
Sens 2 fault	1	
Sens 3 fault	1	
Constant humidity sens 1	2	
Constant humidity sens 1	2	
Constant humidity sens 1	2	
Power need Alarm	2	
Manual Alarm	2	
Annual svc Alarm	2	
Ctrl device fault Alarm	2	

IceControl V2.15

Use/WEB

Energy meter

Name	Val.	Unit
Energy meter select	Off	
Pulse counter reset	Off On	
Pulse counter pulse ratio	1000	p/kwh

Power need alarm

Name	Val.	Unit
Power need/control dev alarm	☐	
Alarm delay	60	s
Alarm limit	50	%

Accounts

Name	Val.
Username	IceControl
Old password	salasana
New password	salasana
Change pass	☐

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02940 Espoo
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myynti@pistesarjat.fi
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Use/WEB

Time

Name	Val.
Clock setup	(•) OK ( ) Set ( ) Refresh
Hours	7
Minutes	40
Weekday	( ) Su ( ) Mo ( ) Tu ( ) We ( ) Th (•) Fr ( ) Sa
Day	5
Month	6
Year	26
DST	Off ⇕

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tel. 010 423 8770
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IceControl V2.15

Use/WEB

Defrost block time

Name	Val.	Unit
Heat block	(•) Off ( ) On	
Start time 1	00:00	hh:mm
End time 1	00:00	hh:mm
Block on 1	☐	Mo
Block on 1	☐	Tu
Block on 1	☐	We
Block on 1	☐	Th
Block on 1	☐	Fr
Block on 1	☐	Sa
Block on 1	☐	Su
Start time 2	00:00	hh:mm
End time 2	00:00	hh:mm
Block on 2	☐	Mo
Block on 2	☐	Tu
Block on 2	☐	We
Block on 2	☐	Th
Block on 2	☐	Fr
Block on 2	☐	Sa
Block on 2	☐	Su
Start time 3	00:00	hh:mm
End time 3	00:00	hh:mm
Block on 3	☐	Mo
Block on 3	☐	Tu
Block on 3	☐	We
Block on 3	☐	Th
Block on 3	☐	Fr
Block on 3	☐	Sa
Block on 3	☐	Su

Pistesarjat-warranty

Terms and conditions

- **Pistesarjat Oy** grants all **IceControl** trace heating control units a full two-year warranty. The warranty covers material and manufacturing defects, and takes effect from the date of purchase, subject to the following conditions:
- The electrical installation was performed by a qualified electrician in compliance with current regulations and the installation instructions provided by Pistesarjat.
- If the technical documentation contains a Certificate of Warranty page, it must be carefully completed in connection with installation.
- The place of purchase has been informed of any defect.
- Pistesarjat has been given the opportunity to troubleshoot the fault to confirm the reason.
- Troubleshooting and repair work are not carried out without Pistesarjat's consent.
- It must be possible to provide proof of purchase.

These installation instructions have been checked as carefully as possible. However, we are not liable for any direct or indirect damages resulting from errors or the incorrect application of the information. All rights to make changes are reserved.

CE

Disposal instructions
Electronic components and devices containing them must **NOT** be disposed of with household waste. They must be disposed of in the same manner as other electrical and electronic waste, in accordance with local legislation.

PISTESARJAT

Kylänportti 2
02940 Espoo
FINLAND

myynti@pistesarjat.fi
tel. 010 423 8770
www.pistesarjat.fi