User's Guide

CTS6000 control panel

Valid for: SW version 1,0092 ➔

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MARKEDSFØRENDE ERHVERVS- OG BOLIGVENTILATION MED VARMEGENVINDING

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Figure

Introduction

The CTS6000 control panel allows functions that are necessary for everyday operation to be viewed and altered. It is thus possible to change various temperature settings, reset alarms and start the unit outside the usual operating period. The CTS6000 control panel supplements CTS6000 WebControl, the program in which more advanced settings are made.

A menu overview and descriptions of all alarms can be found at the end of the guide.

Control panel menus

The panel consists of a "Power" button, an "Alarm" button, four arrow buttons and a "Set" button. The buttons have the following functions. Pressing any button for the first time activates the backlit display. The "POWER" button is used to start/stop the system in "Weekly program" mode or to activate "Extended operation". The "ALARM" button is used to access the alarm log. "Arrow right" is used to enter/open a menu option. "Arrow left" is used to return. "Arrow up" is used to scroll upwards or to increase a parameter setting. "Arrow down" is used to scroll downwards or to reduce a parameter setting. The "SET" button is used to save a new setting.
The startup display shows current system status, see Figure 1. The main menu is opened from the startup display using the arrow up or arrow down button, see Figure 2.
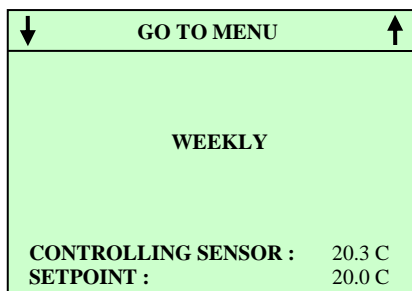
↓ GO TO MENU ↑	↓ MENU ↑
WEEKLY	LANGUAGE SELECTION
	WEEKLY PROGRAM →
	SYSTEM INFORMATION
CONTROLLING SENSOR : 20.3 C SETPOINT : 20.0 C	← EXIT

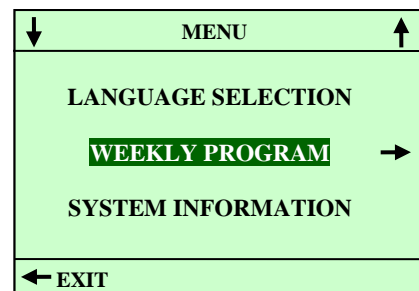**Figure 1 Panel startup display**   **Figure 2 Menue**

The startup display reappears if no button is pressed for 15 seconds.

Alarm log/event log

The alarm log is accessed by pressing the "ALARM" button, i.e. the one marked with a bell on the bottom right of the panel. The most recent alarms/events will then be displayed, see Figure 3. It is possible to scroll through previous alarms/events using the arrow up and down buttons.

← ALARM LOG	← ALARM LOG
13-03-2009 12:55 **System started**	**No new alarms** ↑
13-03-2009 12:52 **System stopped**	
↓	

Figure 3 Alarm log with new alarm   **Figure 4 Alarm log with no alarm**
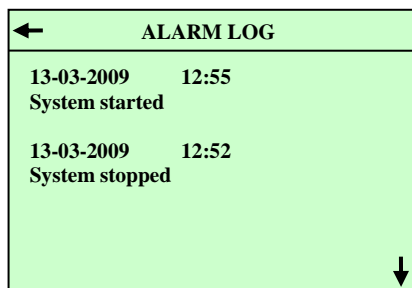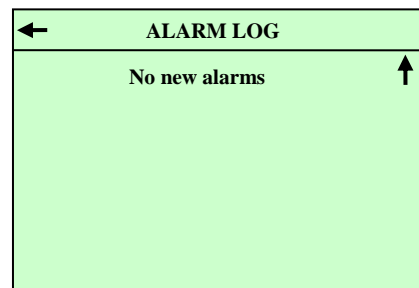
In the event of a new alarm, the red lamp above the alarm button will flash. Press the button to view the alarm and then press "SET" to reset the alarm, see Figure 4. If the system has been stopped as a result of an alarm, it will be restarted once the alarm has been reset in the alarm log if the error that caused the alarm has been remedied.
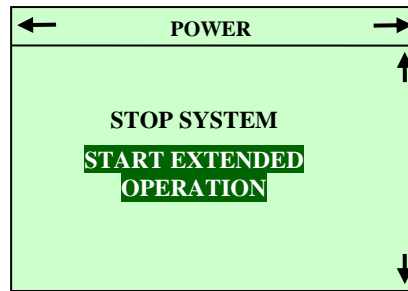
Power button

Figure 5 Power, System in Operation

Pressing the "POWER" button opens the menu shown in Figure 5. "Stop system" is used to stop the system or to start it in weekly program mode. If "Stop system" is selected the unit will remain stopped and NOT follow the weekly program.
If "Start extended operation" is selected, the unit will continue to run for an additional 2 hours (the duration can be changed via CTS6000 WebControl).

Weekly program

The control panel can be used to change the required temperature and start/stop times in the weekly program (setpoints for fan speed or duct pressure can, however, only be changed via CTS6000 WebControl).
The weekly program is opened from the startup display by pressing arrow up or arrow down. The menu shown in Figure 2 will then appear. Use arrow up or arrow down to select "WEEKLY PROGRAM"
Then press arrow right to open the weekly program, see Figure 6.

Use arrow up or arrow down to scroll through the various menu options for the day selected. As standard, Monday is initially displayed when the weekly program is opened. Six program events can be defined for each day of the week. Figures at the top of the display indicate the number of events defined for the day in question. For each program event in which the unit is in operation (Program Event: Active), it is possible to change the required settings, see Figure 6. To do so, select the setting to be changed, press SET to change the setting, press arrow up or arrow down to select the required value and then press SET to save the new setting.
To select another day of the week, highlight Monday, press SET, select the required day of the week using the arrow up or arrow down buttons and then press SET again once the required day has been highlighted.

Figure 6 Weekly program

Language selection

"LANGUAGE SELECTION" is located in the menu shown in Figure 2. The language used in the displays can be changed under "LANGUAGE SELECTION".

Date and time

"DATE AND TIME" is located in the menu shown in Figure 2. The date and time used by the system can be changed under "DATE AND TIME".

System information

"SYSTEM INFORMATION" is located in the menu shown in Figure 2. System status data can be viewed under "SYSTEM INFORMATION".

Service menu

It is possible to change advanced functions, network settings and regulation parameters and to restart the system in the "SERVICE MENU". To access the service menu, activate the control panel by pressing arrow down. Then press and hold "SET" for approx. 10 seconds. The service menu will then appear.

Manuel Set point menu

To enter the manual set point mode one should hold power button until the corresponding menu appears (see Figure 7: Selecting the manual set-point mode).
After selecting the mode one is able to adjust manual mode parameters (see Figure 7: Manual mode parameters setting). Appearance of the menu depends on the current settings of the systems. The difference for systems with inlet only VAV fan and two 2 step fans can be seen in Figure 8 and 9.
After the parameters are set system goes into manual mode (see Figure 10: Java GUI manual mode).
Setting of the parameters is done in usual way with the arrows and SET keys.
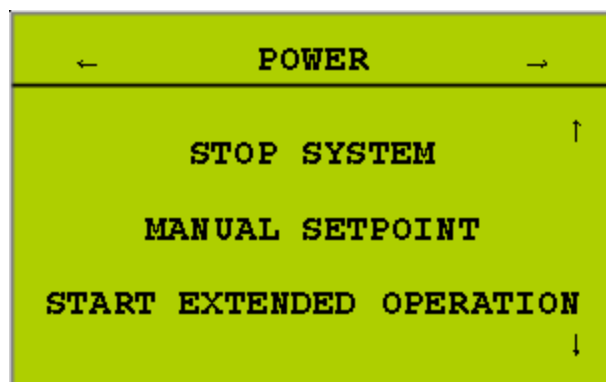
Figure 7 Selecting the manual set-point mode

```
         MANUAL SETPOINT
  Manual mode              ON
  Channel pressure         Pa
  - Inlet                 300
  SETPOINT               25.0

  MASTER SENS: T3 = 2.5 C
  ← EXIT     SET = CHANGE↑↓
```

Figure 8 Manual mode parameters setting

```
         MANUAL SETPOINT
  Manual mode              ON
  Fan Speed                Pa
  - Inlet                 LOW
  - Exhaust               HGH
  SETPOINT               25.0
  MASTER SENS: T3 = 2.5 C
  ← EXIT     SET = CHANGE↑↓
```

Figure 9 Manual mode parameters setting

These actions are available:
1. Parameters view:
   Buttons Right, Left, Up, Down use for selecting of the parameter(s) or part of parameter
2. Parameters editing:
   a. Button SET – start of value editing
   b. Buttons Up/Down – change a value +1/-1
   c. Button Left – cancel editing
   d. Button SET – store a changed value
3. Return back from menu / sub-menu
   Button Left
After the new week program begins the system automatically switches to auto mode turning the manual mode off.
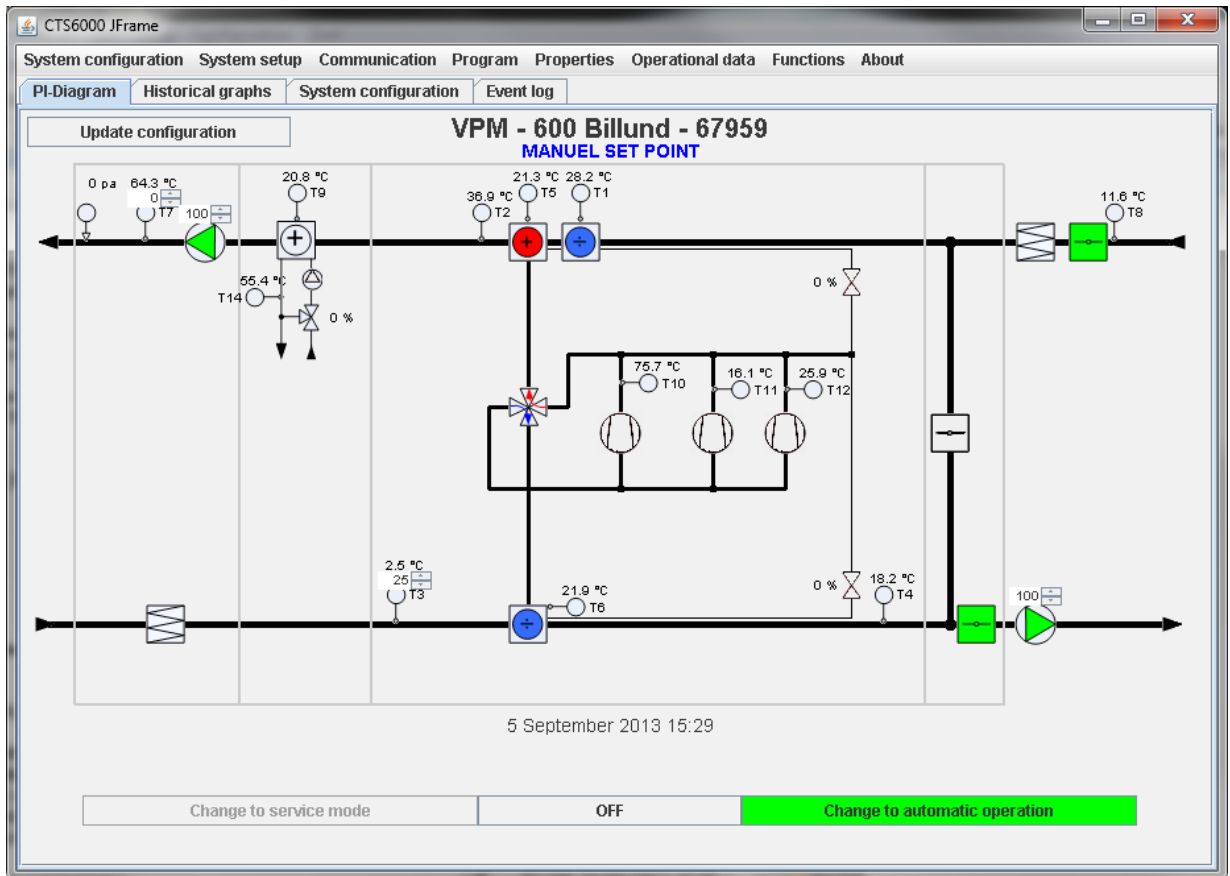
Figure 10 Java GUI manual mode, in PI Diagram

Menu overview


```
MONDAY
PROGRAMME  :        1 2-

PROGRAM POINT :     AKTIVE
TIME. :             17:00
VENTILATION :       NORMALE
SET POINT:          20,0
COPY TO NEXT:       NO

LA SORTIE   SET=CHANGE  ↓↑
←
```

```
T1        22,7°C
T2        21,4°C
T3        20,7°C
T4        25,1°C
T5        23,7°C
T6        22,9°C
```

```
T7        20,7°C
T8        21,4°C
T9        22,7°C
T10       25,1°C
T11       24,7°C
T12       22,9°C
```

```
T13       22,7°C
T14       21,4°C
T15       20,7°C
T16       25,1°C
TPANEL    23,7°C
```

```
ANALOG1   100
ANALOG2   100
ANALOG3   000
ANALOG4   000
ANALOG5   000
ANALOG6   100
```

Statusmenu → Week programme → (display)

Unit Information

Date & Time → Date & Time → Change

Language → Present Language → Change

Statusmenu ↔ Language

Date & Time

Unit Information

Network ↔ IP ↔ Netmask

Regulation ↔ Min. Sommer ↔ Max Sommer/Winter ↔ Min. Winter

Restart/Unit

Week Programme

Figure 11: Menue overview

Description of alarms

Alarm name	Description	Remedy
Door open ID 32 Level - 4	Door to fans is open. Ventilation unit stops in order to prevent personal injury.	Close door and reset alarm.
Fire alarm ID 33 Level - 4	The unit is equipped with two fire thermostats: one in the inlet duct, the other in the exhaust duct. If temperature becomes excessive, the thermostats are activated.	Reset fire thermostats in unit and reset alarm.
Smoke alarm ID 30 Level - 4	Smoke detectors can be fitted in the unit. One of these smoke detectors has sensed smoke.	Check smoke detector and reset alarm.
Thermal relay ID 34 Level - 4	Motor protector has cut out; Klixon in compressor motor or fan motor has cut out; or error has occurred in frequency converter.	Reset motor protector or remedy error in frequency converter and reset alarm.
High pressure alarm ID 2 Level - 4	A high pressure alarm can be activated if there is insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Low pressure alarm 1 ID 3 – 6 Level - 2	Low pressure alarm 1 can be activated if there is insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	The controls stop the compressor itself until the pressure switch is reset. Max. 5 times an hour, however.
Condenser high pressure ID 8 – 11 Level - 4	Upper limit(2) for cooling circuit pressure set under "Pressure limits" has been exceeded. The alarm can be activated by insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Evaporator low pressure 1 ID 9 – 12 Level - 3	Lower limit(2) for cooling circuit pressure, which is set under "Pressure limits", has been exceeded. The alarm can be activated by insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	The controls stop the compressor until pressure is regained. Max. 5 times an hour, however.
Evaporator low pressure 2 ID 10–13 Level - 4	Evaporator low pressure 2 is activated if Evaporator low pressure 1 has been activated 5 times within the last hour.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Condenser overheated ID 20 Level - 4	Condenser temperature (T5) setting under "Pressure limits" too high. The alarm can be activated by insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Evaporator too cold ID 21 Level - 4	Evaporator temperature (T6) setting under "Pressure limits" too low. The alarm can be activated by insufficient air flow through the unit. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.

Alarm name	Description	Remedy
Timeout for prevention function ID 42–43 Level - 4	The prevention function for high or low pressure alarms has run for more than 20 minutes but pressure is still outside the limits. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Frost alarm ID 35 Level - 2	Temperature of hydraulic after-heating coil too low.	The controls open the water valve and start the pump to keep the heating coil free of ice.
Fatal frost alarm ID 29-39 Level - 4	Temperature of hydraulic after-heating coil remains too low despite prevention attempts.	The unit is stopped. Check the after-heating coil.
Flow alarm ID 36 Level - 2	Insufficient air flow across electric after-heating coil for coil to cut in. This may be caused by blocked filters, loose V-belts or dampers which have not opened.	Reset alarm. If the alarm repeatedly occurs for no apparent reason, call service.
Compressor starts ID 40 Level - 2	A compressor has started 12 times within one hour.	Set compressor minimum off time to at least 5 minutes and reset the alarm.
VLT compressor starts ID 41 Level - 4	A VLT compressor has started 11 times within one hour.	Set compressor minimum off time to at least 6 minutes and reset the alarm.
Pressure pipe temperature T10/11/12/13 ID 50 - 51 - 52 – 53 Level - 2	Pressure pipe temperature on compressor 1/2/3/4 has exceeded 125°C.	The controls stop the compressor and do not allow it to restart before the temperature has dropped below 50°C. **If the alarm repeatedly occurs, call service.**
VLT x has not responded to the 5 latest requests ID 111 Level - 4	A communication error has occurred between the control unit and the VLTs.	The unit stops. Reset alarm. If the alarm repeatedly occurs, call service.
Netavent unit x has not responded to the last 5 requests ID 110 Level - 2	A communication error has occurred between the control unit and the Netavents.	Reset alarm. If the alarm repeatedly occurs, call service.
T3 is set as the controlling sensor ID 112 Level - 1	If a Netavent unit has been selected as the controlling sensor, but communication with the unit concerned cannot be established, the control unit switches instead to T3 (exhaust temperature).	Reset alarm.
Defrost alarm ID 25 Level - 3 ID 26 Level - 4	Defrost signal within the first 15 minutes after power up, or defrosting not finished within 2 hours in spite of defrosting attempts.	Compressor–Stop for appliance with heater = heater ON System – Stop for appliance with no heater.
Filter Alarm ID 31–38 Level - 2	Filter time out – 90days	Clean filter and reset Alarm
Alarm time / date ID120-121Level - 4	Wrong time or date	Set date and time
24 Volt DC supply ID 123 Level - 4	24 Volt DC supply for pressure transmitters is missing.	Check 24 Volt DC supply and reset Alarm