



Operating- and servicemanual  
Compact 610  
Version 3.0

<b>The introduction</b> .....	<b>2</b>
Software version and program variant in start-up sequence .....	2
Earlier Software versions.....	2
<b>Defrosting</b> .....	<b>3</b>
<b>Temperature control and regulation:</b> .....	<b>3</b>
<b>Error codes in the display</b> .....	<b>4</b>
<b>User menu</b> .....	<b>5</b>
<b>Service program for relays and electrical components</b> .....	<b>6</b>
<b>Plug connections onboard the controller</b> .....	<b>7</b>

## The introduction.

To Compact 6610 range is used three different program variants. There is direct access to the menus on the front of our cabinet, which was a great help for the service men and also for the workers in the factory here in Vojens.



Make sure the appliance is switched off at the socket before service is performed on electrical parts. It is not sufficient to switch off the cabinet by the START/STOP key as there will still be voltage to some electrical parts of the cabinet.

## Software version and program variant in start-up sequence

When the cabinet switches ON, the controller shows the software version and program variant.

The version number glows in 2 sec. followed by name on the program variant until the controller is finished with the start-up sequence. The program variant is like the example here below.

*In the example above software ver. 2.1 and program variant M2+ is presented.*

Cabinets with compressor (HAV) is given by the symbol "n". The symbol should look like a "+" which means including compressor.

Cabinets without compressor (FAV) is given by the symbol " - ". The " - " symbol means "Compressor not included".

Because program variants like K and M is difficult to present in a 7-segment display, the symbols below is used instead:

- H** (Refrigerator).
- n** (Extended temperature range).

Other program variants name:

- F** (freeze).
- B** (Counter).
- V** (Varm/hot/swallow cabinets)\*.
- P** (Process cabinets).
- E** (Extreme low temperature).

\* Complete new variant

## Earlier Software versions

From 127 to 138: version **2.0**  
 From 138 to 122: version **2.1**  
 From 122: version **3.0**

## Defrosting

The defrosting cycle runs 4 times each day. There exist no lamps for indication of a running defrosting cycle.

If the cabinet is operating under severe load (frequent door opening and frequent replenishment) manual defrosting can become necessary. The manually defrosting can be carried through by pushing **P** and **+** key in more than 3 sec. The cabinet starts a defrosting cycle.

With the same to keys, a defrosting cycle can be stopped before end time.

The next defrost will occur 6 hours later.

Like other standard cabinets, the defrosting cycle is also controlled by time. This means that if the temperature hasn't reached the stop temperature, the timer function will stop the defrosting cycle.

## Temperature control and regulation:

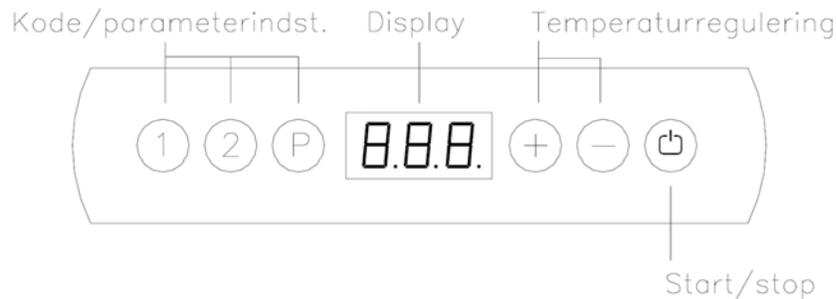
Press **P** to see the cabinet temperature setting; the display will show the set temperature.

### Temperature up:

Keep **P** pressed. At the same time, press **+**. Each time **+** is pressed the temperature will change one degree. When the display shows the desired temperature let go of the two keys and the setting has been made. By keeping **+** pressed, the digits change fast.

### Temperature down:

Keep **P** pressed. At the same time, press **-**. Each time **-** is pressed the temperature will change one degree. When the display shows the desired temperature let go of the two keys and the setting has been made. By keeping **-** pressed, the digits change fast.





### ***Error codes in the display***

<b>Display code</b>	<b>Description</b>
- o -	The door is open
A1	Door alarm "dAd" from LAL and/or EAL has been activated
A2	Local upper alarm LHL is or has been activated
A4	External upper alarm EHL is or has been activated
F1	Cabinet sensor error. In the meantime the cabinet itself will maintain the set temperature by the memory of the controller. Temperature stability will be affected. Service assistance is required.
F2	Evaporator sensor error. Service assistance is required. The cabinet will keep running until the error has been mended.
F3	Condenser sensor error. The cabinet will keep running, until the error has been mended. Service assistance is required.
F7	Indicates that the condenser temperature is too high. The cause might be a clogged condenser, or too high ambient temperature. If the condenser or air filter needs cleaning, the cabinet must be disconnected at the mains power. Cleaning of the condenser is done with a brush or a vacuum cleaner. The air filter can be removed and cleaned in a dishwasher at max. 50°C. If the ambient temperature is too high, the placement of the cabinet might be wrong, and an alternative place should be found. Ventilation might help. If this does not help, request service assistance.

## User menu

Push on **P** and **1** buttons at the same time in more than 3 sec. and the first Setup menu appears in the display.

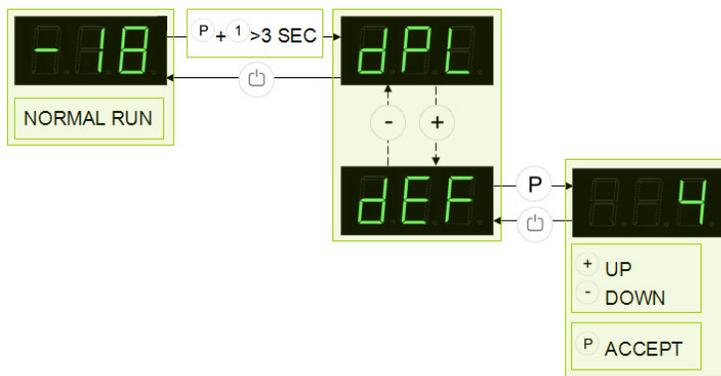
With **+** and **-** buttons its possible to look through each menu items in the "User menu". Push on **P** button to activate the desired item and adjust the setting with **+** and **-** buttons.

To confirm the new setting, push **P** button. Leave the menu item and user menu with the **1** button.

Menu access P + 1 →	↓	→		
Dry refrigeration	dC	H0/H1		Activation of dry refrigeration. (H0=on; H1=off)
Rapid thaw	UF	on/off		Activation of rapid thaw. (on/off)
Local alarm setting	LAL	LHL	°C	Setting the upper alarm limit. At alarm, the display shows: <b>A2</b>
		LHd	min.	Time delay for the upper alarm limit.
		dA	On/off	Activation of local door alarm. At alarm, the display shows: <b>A1</b> (1=on / 0=off)
		dAd	min.	Time delay for the door alarm.
External alarm setting	EAL	BU	On/off	Activation of buzzer. The buzzer sounds at alarms A1, A2. (1=on / 0=off)
		EHL	°C	Setting the upper alarm limit. At alarm, the display shows: <b>A3</b>
		ELL	°C	Setting the lower alarm limit. At alarm, the display shows: <b>A4</b>
		EHD	min.	Time delay for the upper alarm limit.
Temperature offset (sensor calibration)	CAL	ELd	min.	Time delay for lower alarm.
		CA	K	-5...+5 K
Escorting alarm limits	ALL	FAS/ESC		Activation of escorting alarm limits. <b>FAS</b> = fixed limits / <b>ESC</b> = limits following the setpoint
No. of defrosts	dEF	4		Number of defrosts in 24 hours.

\* Applies only on cabinets with dry cooling.

\*\* Applies only on cabinets with rapid thaw. This mode can only run if set point is set between +2 and +8 °C. When this program runs, the lamp  glows in the display. If the temperature of the evaporator sensor gets above 60 °C, the rapid thaw mode will be cancelled.



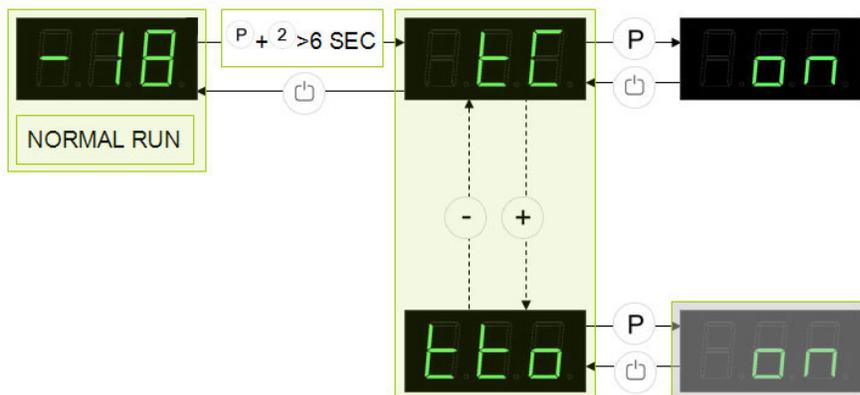
## Service program for relays and electrical components

Push on **P** and **2** buttons at the same time in more than 6 sec. and the menu item [ **tC** ] appears in the display.

With **+** and **-** buttons its possible to look through each menu items in the “Service program”. Push on **P** button to activate the desired relay and the display glows with [ **on** ]. The desired relay conducts now power to the electrical component.

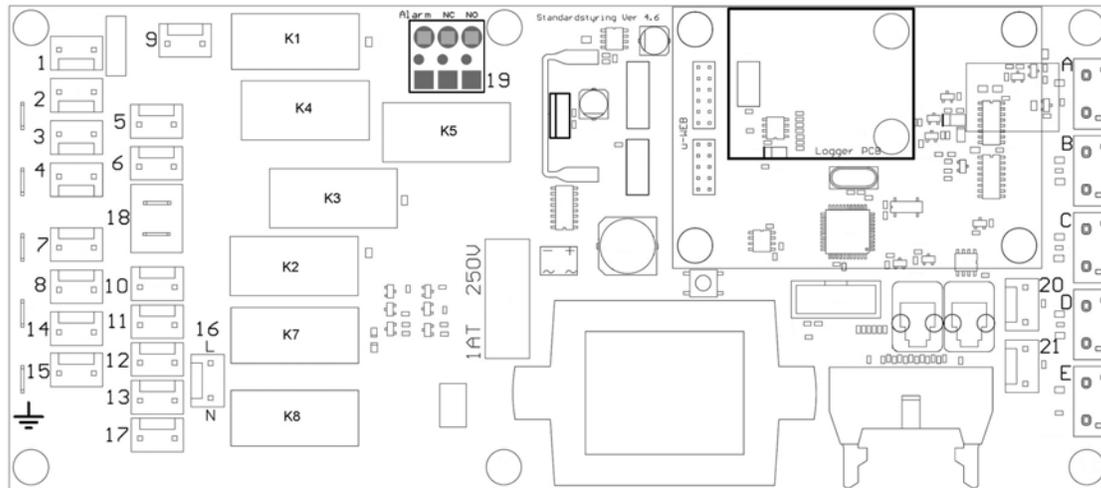
Push the **☐** button to switch off the power from the electrical component. Leave the service program with the **☐** button.

Parameter	Description
tC	Test of compressor and condenser fan
tF	Test of evaporator fan
td	Test of defrosting heating element
tL	Test of light
tA	Test of potential free alarm relay
tdP	Test of display



## Plug connections onboard the controller

The description here below explains the plugs or terminals to each special function and relay.



Plug	Electrical component	Description
1 2 3 4	230 Volt relay – K1	The relay supplies the compressor and the condenser fan with power.
5 6	230 Volt relay – K3	The relay supplies the evaporator fan with power.
7 8 14 15	230 Volt relay – K2	The relay supplies the defrosting heating element and the drip water heating element with power
9	230 Volt relay – K4	The relay supplies the halogen light transformer with power (230V/12V).
10 11 12 13 17	230 Volt relay – K7 and K8	The relay supplies the front frame heater, re-evaporating heating element, and the condensing pump with power. When the cabinet is switched on, the power is constantly viable.
18	Plug connection for the safety thermostat	The plug is connected in series with the defrosting heating element.
19	230 Volt relay – K5	The potential free alarm relay. The relay changes position when the cabinet switches the power on. By alarms and by power failure the relay switches back to normal position.



16	230 Volt input	These terminals are the power input connection with 230 V to the controller.
20	Digital input from the door contact	When these terminals are not in use, the controller lets the evaporator fans keep running. By shortcutting the terminals, the fan stops.
21		
A	Room sensor input	NTC sensor
B	Evaporator sensor input	NTC sensor
C	Condenser sensor input 1	NTC sensor
D	Condenser sensor input 2	NTC sensor
E	Sensor input for a extra sensor	NTC sensor