

BUS BODY ELECTRONICS

SC600 REVO[®]-E BYD HYBRID

Operating instructions
- Busdriver

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1 Introduction

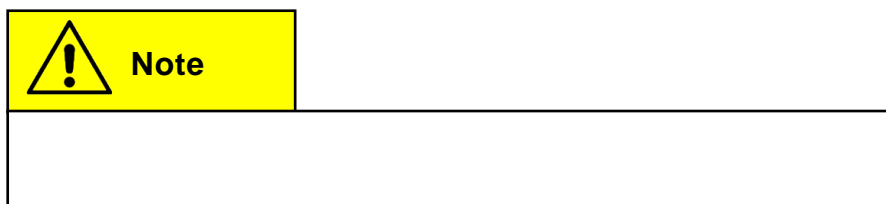
1.1 Intended purpose

The SC600 is a system intended to control the HVAC components (heating, ventilation, air-conditioning) in buses, for example roof-top air-condition systems, heating devices, etc. It consists of a control panel (control device as an interface between human and machine) that is integrated into the dashboard.

This control panel allows the driver to control the roof-top air-conditioning system that has ventilation, cooling and heating functions for the roof. Additionally, this control panel can also be used to control the heating system on the floor.

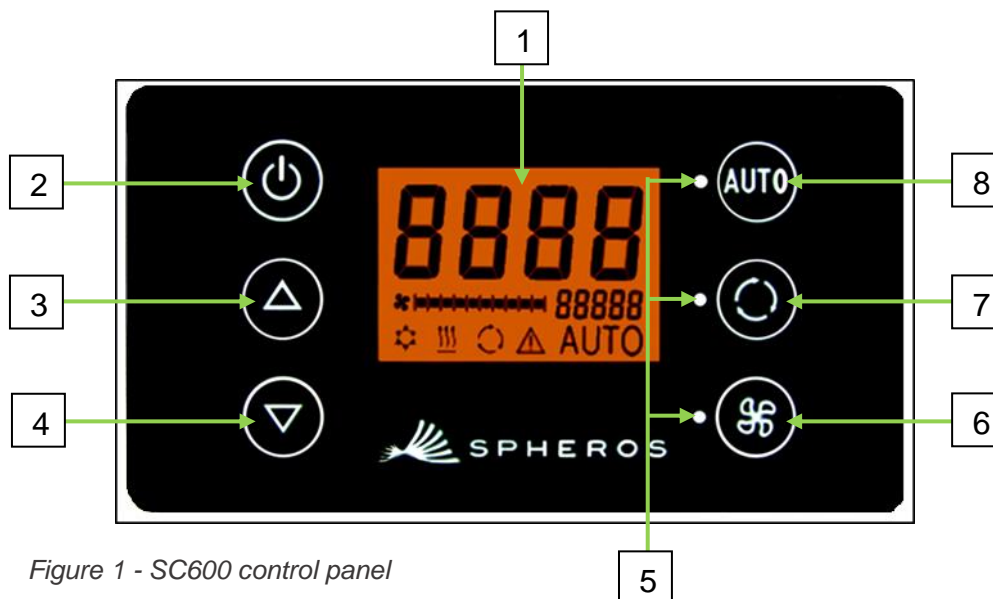
The controller for the air-conditioning systems components can operate automatically. To do so, the bus driver simply has to set the desired temperature.

1.2 Symbols used



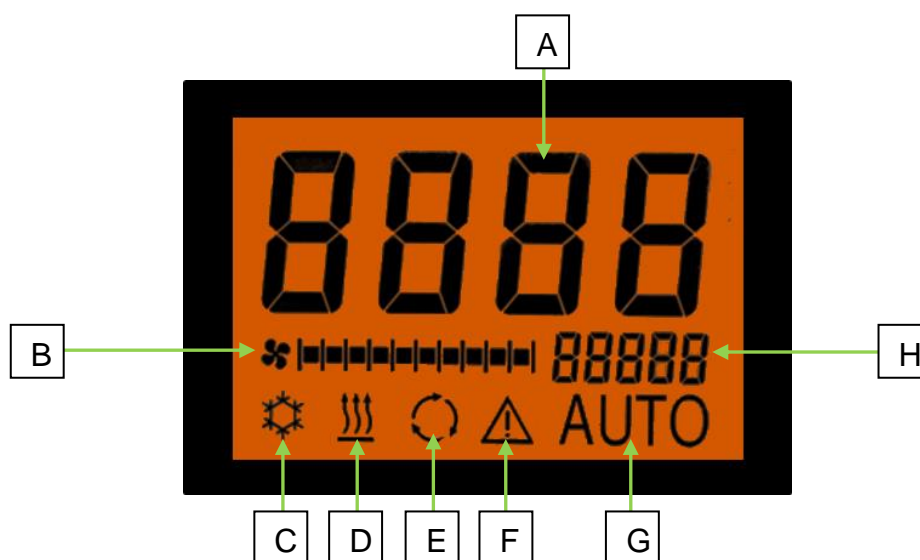
1.3 Description of the control panel

The control panel components are depicted and described in the following image.



- | | |
|------------------|---------------------------------------|
| 1. Display | 5. Function status light |
| 2. On/off button | 6. Blower button |
| 3. UP | 7. Fresh air/recirculating air button |
| 4. DOWN | 8. Auto button |

1.4 Description of the display



- | | |
|--|---------------------------|
| A. Desired value display, room temperature | E. Recirculating air on |
| B. Blower level manual | F. Error display |
| C. Cooling mode | G. Auto mode active |
| D. Heating mode | H. External temp. display |

1.5 Mode overview

The SC600 system includes 2 different modes – Operating mode and Error mode.

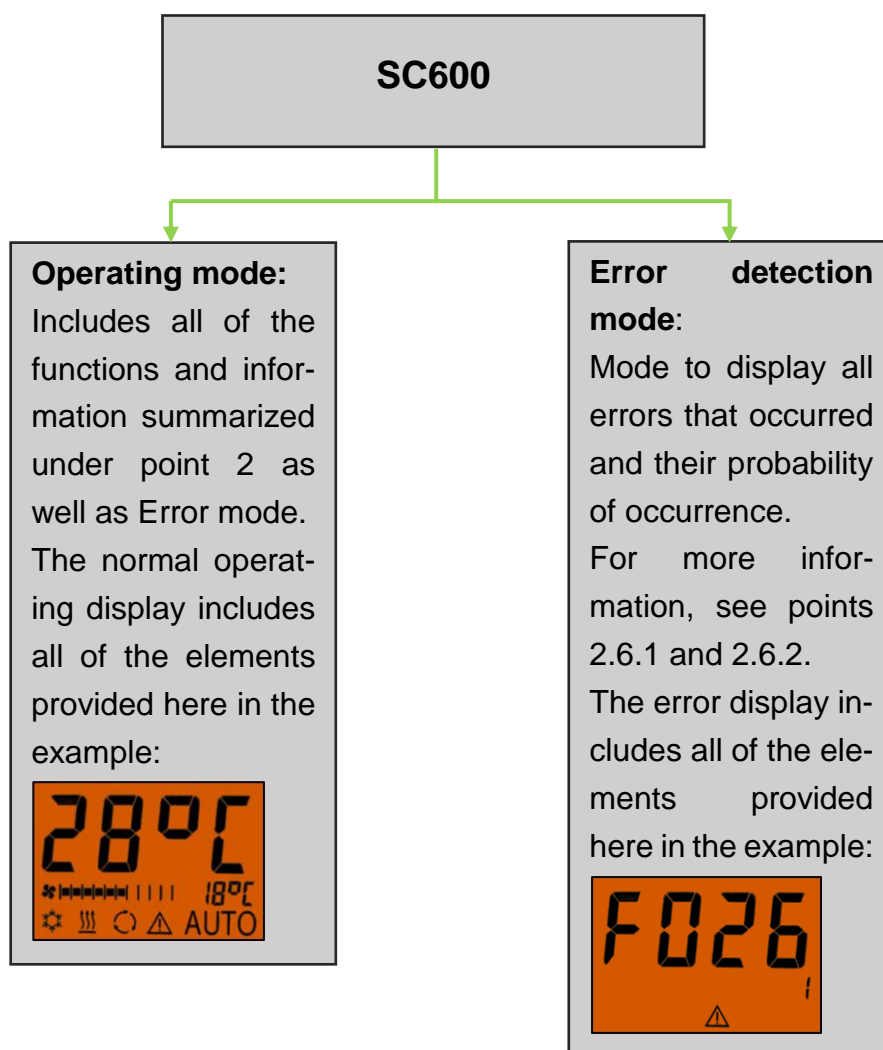


Figure 3 - SC600 mode overview

2 Use

2.1 Activation/deactivation

2.1.1 Activation


Press  button

- Sets the last configured temperature; Auto mode off (Figure 4).

2.1.2 Deactivation

Press  button

- Display deactivated.

Press  button for 2 seconds until OFF appears

- System deactivated.


2.2 Auto mode



Note

Auto mode can be turned on only if the motor has been started.

2.2.1 Activation

Press  button if Auto mode is off

- Mode is on - corresponding status light and function symbol light up on the display (Figure 6).



Note



If Auto mode is on, the system automatically turns on Cooling Mode  and Heating mode  (if available) as needed (Figures 7 and 8). Activate Auto mode in order5 to use all functions.



Figure 4 - SC600 start display



Figure 5 - SC600 deactivation



Figure 6 - SC600 Auto mode activated




Figure 7 - SC600 Auto mode activated, Cooling mode



Figure 8 - SC600 Auto mode activated, Heating mode

2.2.2 Deactivation

Press  button if Auto mode is on

- Mode is off - corresponding status light and function symbol are off (Figure 9).

Note

When Auto mode is deactivated, the air conditioning compressor (after a run time of 90 seconds max.) and the heater are turned off.

The blower will continue to be controlled automatically.



Figure 9 - SC600 Auto mode deactivated

2.3 Configuring the blowers manually

Note

It is not possible to control the blower manually.

2.4 Fresh air/recirculating air function

Press  button when fresh air valves are open

- System activates recirculating air function for 10 minutes (corresponding function status light and display symbol light up).
- After running for 10 minutes, the system turns off the manual recirculating air function. The system then controls the fresh air valves automatically.
- Pressing the button again within 10 minutes will deactivate the manual recirculating air function. The system then controls the fresh air valves automatically.

Note

If the manual recirculating air function is on, the corresponding status light and the display symbol will light up (Figure 10).



Figure 10 - SC600 recirculating air function activated

2.5 Dehumidify

Press  button for 2 seconds

→ Dehumidify air function is on (Figure 11).



Note

Dehumidify can only be activated when Auto mode is on.

2.6 Setting the temperature

Press  button

→ Desired temperature +1 °C.

Press  button

→ Desired temperature -1 °C.



Note

Temperature can be configured for 1°C intervals between 15 °C and 28 °C.

2.7 Errors





Note

If a system error occurs, the error symbol will appear on the display (Figure 13).

2.7.1 Error detection mode

2.7.1.1 Activation

Press  and  buttons at the same time for 2 seconds

→ Mode is on.

→ Error code (F001) and occurrence count (1 here) will be displayed (Figure 14).

2.7.1.2 Reading out errors



→ Scroll through the error codes with  or .



Figure 11 - SC600 dehumidify activated



Figure 12 - SC600 setting the temperature



Figure 13 - SC600 errors



Figure 14 - SC600 Error detection mode

→ Reset the counter with **AUTO** (after resetting, the counter shows the value 1 if the error persists).

2.7.1.3 Ending

Press **AUTO** and **SPHEROS** buttons for 2 seconds

→ Normal operating display appears (Figure 15).



Figure 15 - SC600 normal operating display

2.7.2 Error overview

Error code	Component	Cause	Remedy
F001-015	Not used		
F016	EDS		➤ Restart system
F017	Pressure sensor	➤ Defective sensor ➤ Wiring harness defective	➤ Inspect wiring harness ➤ Replace sensor
F018	Duct/convactor temperature sensor	➤ Defective sensor Wiring harness defective	
F019	Ice sensor	➤ Defective sensor Wiring harness defective	
F020	Room temperature sensor	➤ Defective sensor Wiring harness defective	
F021	Environmental temperature sensor	➤ Defective sensor Wiring harness defective	
F022	Ice sensor	➤ Icing ➤ Temperature too low	Wait until sensor has defrosted
F023 F024	High pressure Low pressure	Brief system overload because of high motor speed at high environmental temperature	The system turns off for 5 minutes and tries to restart. If the error code persists, consult our service center
F025-32	Not used		

Table 1 - SC600 error code overview

