

BUS BODY ELECTRONICS

SC600 INDIEN

Operating instructions
- Busdriver

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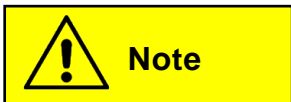
1 Introduction

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...

It consists of a control element integrated into the dashboard (control device as an interface between human and machine) and a rooftop air-conditioning system or floor heater. The roof air-conditioning system can take over ventilation, cooling and heating functions depending on the version. In addition, the controller for the air-conditioning 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.

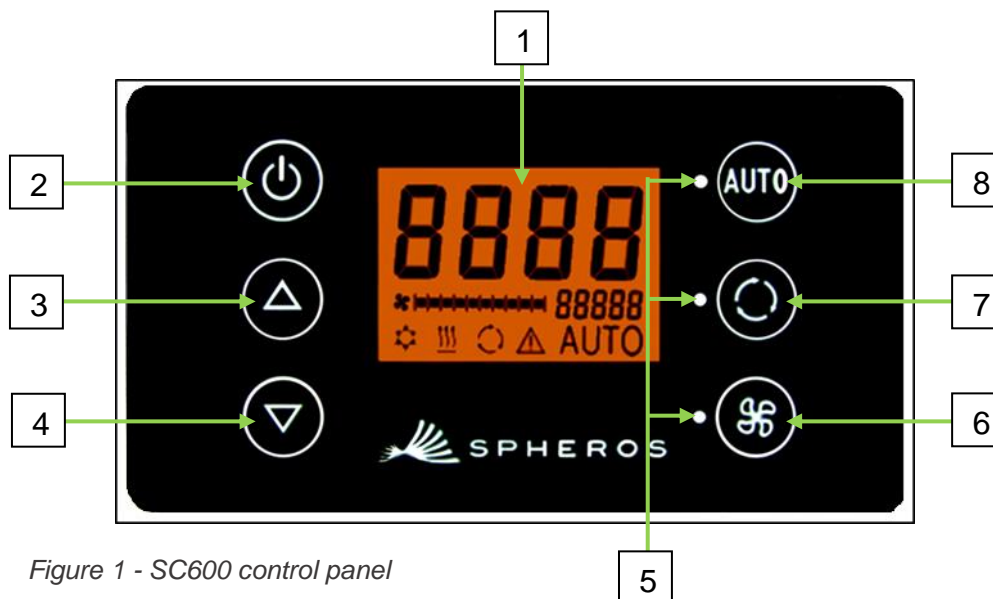


Figure 1 - SC600 control panel

- | | |
|------------------|---------------------------------------|
| 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

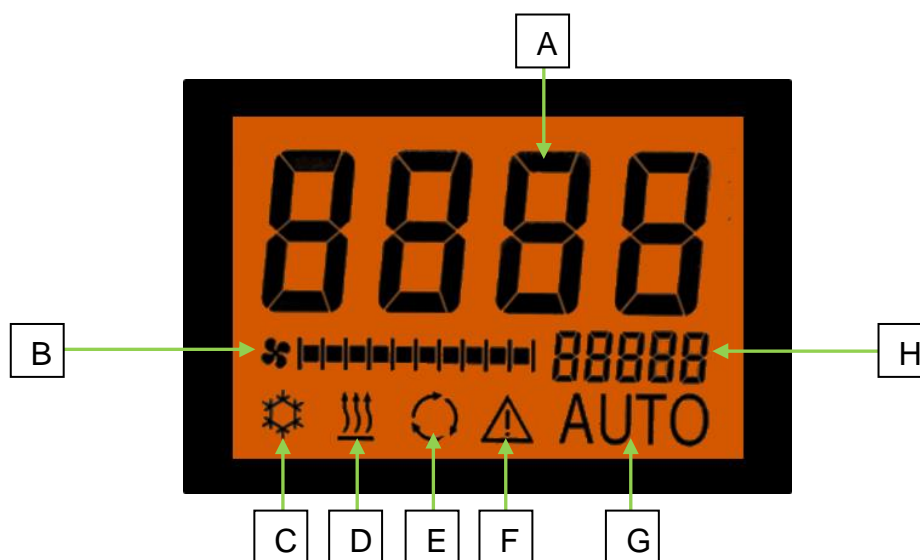


Figure 2 - SC600 display

- | | |
|--|---------------------------|
| 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.

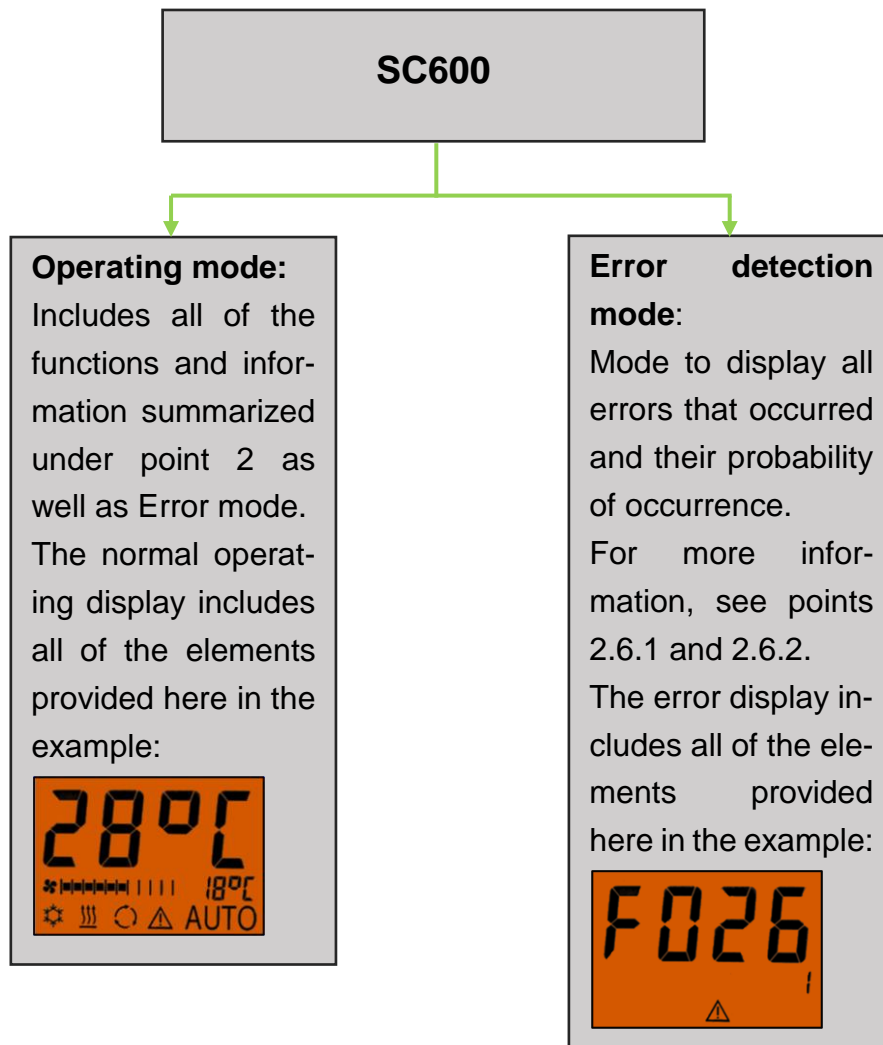


Figure 3 - SC600 mode overview

2 Use

2.1 Activation/deactivation

2.1.1 Activation

Press  button

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



Figure 4 - SC600 start display



Note

Can only be activated when the ignition is switched on.

2.1.2 Deactivation

Press  button


- System deactivated.



Figure 5 - SC600 Auto mode activated

2.2 Auto mode

2.2.1 Activation

Press  button if Auto mode is off


- Auto mode is on - corresponding status light and function symbol light up on the display (Figure 5).




Figure 6 - SC600 Auto mode activated, Cooling mode



Note

If Auto mode is on, the system automatically turns on Cooling Mode  as needed (Figure 6).

2.2.2 Deactivation

Press  button if Auto mode is on

- Mode is off - corresponding status light and function symbol are off (Figure 7).



Figure 7 - SC600 Auto mode deactivated



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 blowers will continue to be controlled automatically if the blower level was not manually configured.

2.3 Configuring the blowers manually

2.3.1 Activating the controller manually

Press  button

- Manual operation of the blower is activated - the blower will continue running at the current speed.
- The blower level can be manually set 3 seconds after pressing the blower level button (the corresponding status light **blinks** during this time).



Figure 8 - SC600 setting the blower level manually

2.3.2 Setting blower level

The blower can be set in level increments of 0 (blower speed = 0%) to 10 (blower speed = 100%).

Press  button

- Blower level +1 ( → ).

Press  button

- Blower level -1 ( → ).



Note

Configurations can only be applied within the permitted limits (e.g. vehicle motor off → blow speed max. 25%).

If the blower is set below 20%, the cooling and heating functions are deactivated.

2.4 Fresh air/recirculating air function

Press  button

- System switches to fresh air/recirculating air function for 10 minutes (i.e. if the fresh air function is currently on, the system switches to recirculating air and vice versa).
- After 10 minutes, the system activates the function that best supports reaching the desired temperature stipulated.
- Pressing the button again within 10 minutes toggles and resets the function for 10 minutes.



Figure 9 - SC600 recirculating air function activated



Note

If the fresh air valves are closed, the corresponding status light and the display symbol will light up (Figure 9).

2.5 Setting the temperature

Press  button

- Desired temperature +1 °C.

Press  button

- Desired temperature -1 °C.

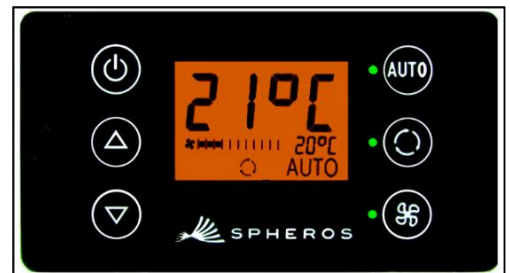


Figure 10 - SC600 setting the temperature



Note

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

2.6 Errors



Note

If errors are present, the function symbol blinks on the display (Figure 11).

The warning symbol will not display for inactive/saved errors. In order to display inactive errors, switch to Error detection mode.

2.6.1 Error detection mode

2.6.1.1 Activation

Press and buttons at the same time for 2 seconds

- Mode is active – code input window is opened (Figure 12).

2.6.1.2 Entering the access code

- Changeable number of the access code blinks.
- Switch between numbers with or .
- Change the value of the blinking number with or .
- Confirm the code or cancel the entry with .

2.6.1.3 Reading out errors

- Error code (F026 here) and occurrence count (1 here) will be displayed (Figure 13) if the correct code is entered.
- Scroll through the error codes with or .
- Reset the counter with (after resetting, the counter shows the value 1 if the error persists).

2.6.1.4 Ending

Press button for 2 seconds

- Normal operating display appears (Figure 14).



Figure 11 - SC600 errors



Figure 12 - 00000 access code entry



Figure 13 - SC600 reading out the error code



Figure 14 - SC600 normal operating display

2.6.2 Error overview

Error code	Components	Cause	Remedy
F001	Control device	➤ Internal error	➤ Replace ECU
F017	Ice sensor	➤ Defective sensor ➤ Wiring harness defective	➤ Inspect wiring harness ➤ Replace sensor
F018	Duct temperature sensor	➤ Defective sensor ➤ Wiring harness defective	
F019	Room temperature sensor	➤ Defective sensor ➤ Wiring harness defective	
F020	Environmental temperature sensor	➤ Defective sensor ➤ Wiring harness defective	
F021	Floor temperature sensor	➤ Defective sensor ➤ Wiring harness defective	
F022	Condenser pressure sensor	➤ Defective sensor ➤ Wiring harness defective	
F025	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
F026	Ice sensor	➤ Icing ➤ Temperature too low	➤ Wait until sensor has defrosted
F033	Configuration error	➤ Incompatible parameter selected	➤ Change corresponding parameter

Table 1 - SC600 India error overview



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