

# SControl

**The multifunction controller for SolarVenti® warm air collectors**

## Control is good - SControl is better!

The SControl's many functions are designed to operate with the SolarVenti® panel and allow full control along with individual adjustment of temperature, humidity and the time setup. These settings allow you to decide whether your solar ventilation system is to be operated for heating, dehumidification, controlled and continuous ventilation or even for cooling (day and night cooling). By measuring relative humidity and temperature the SControl also calculates the dew point inside and outside, thus switching off the ventilation operation if the outside humidity is too high.

The adjustable fan speed and various safety functions such as the anti freeze barrier allow its adaptation to different room sizes and usage. It is also possible to operate two or more parallel fans. Pairing SolarVenti® ventilation system with the SControl allows for easy programming that allows it to control in living rooms, bathrooms, holiday homes, warehouses, workshops or even in the basement - the SControl offers the ideal system configuration for almost any room and almost any ventilation design.

## Intuitive operation!

The innovative operation via the "Lightwheel" dial and with just four other buttons make it easy to operate. From the screen display and operation status indicator LED's important information can be read easily and clearly. A commissioning assistant helps you set up SControl in just 3 steps. You can choose from 5 pre-configured ventilation programs

## Low consumption due to its hybrid operation!

The solar module integrated in the SolarVenti® panel is connected to the SControl together with a 12 volts power supply. Thanks to the energy-saving hybrid technology the power supply only uses the power that cannot be generated by sunlight. So only a few kwh of electricity per year are needed to operate a SolarVenti® ventilation system.



**IDEAL FOR THE FOLLOWING APPLICATIONS:**

- Living room ventilation
- Basement ventilation and dehumidification
- Combined living room / bathroom ventilation
- Garage ventilation and dehumidification
- Wherever temperature, humidity, dew point regulation or time-controlled ventilation with the SolarVenti® warm air collector is desired

## FUNCTION HIGHLIGHTS

- Collector start temperature
- Temperature differential function
- Humidity-dependent ventilation
- Maximum room temperature
- Thermostat function
- Cooling function (day and night)
- Dew point lock against condensation
- Timer and interval mode
- Frost protection fan lock

## TECHNOLOGY HIGHLIGHTS

- 2 speed-controlled fan outputs
- Adjustable fan speed for various functions
- Extra relay output
- Error detection
- 1 internal combination sensor (temperature/humidity/dew point)
- 2 inputs for combination sensors (temperature/humidity/dew point)
- 2 inputs for temperature sensors Pt1000
- 24 watts switching capacity = max. 5 fans
- MicroSD card for updates + data storage
- Internet ready through Vbus®

## OPERATIONAL HIGHLIGHTS

- Multi-language
- Intuitive operation with
  - „Lightwheel“ control dial
  - Speed-dial keys for speed and operating mode
- Commissioning assistant
- 5 preconfigured systems
- Protected setting range for installers (operator code)

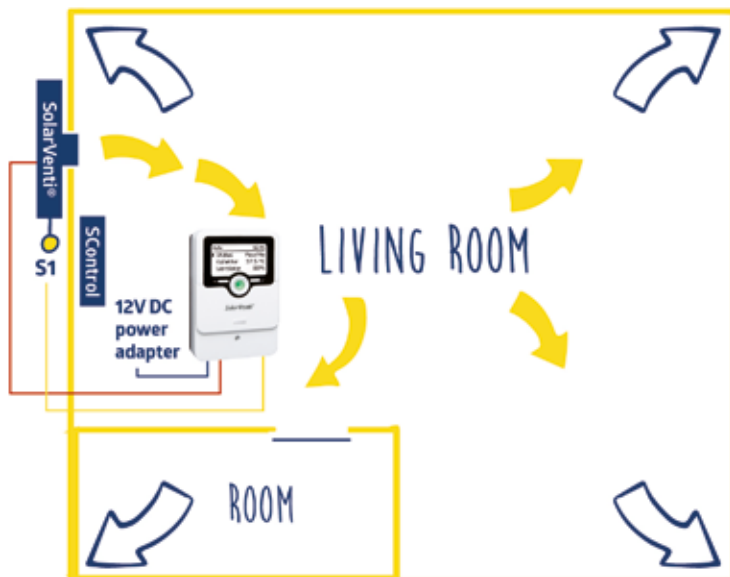
# Application examples SControl

## SolarVenti® - Basics Set SC2

### Living room with supply and exhaust air via the building shell

If the temperature at collector sensor S1 exceeds the set start temperature (factory setting 20° C adjustable), the supply air fan (V1) is switched on. The living room is ventilated, dehumidified and heated. The exhaust air escapes through natural air leakage in the building shell or via special ventilation devices, such as trickle vents integrated in the window frame.

The internal combination sensor in the SControl limits the room temperature to a maximum of 25° C (supply fan V1 switches off). Optionally, the internal combination sensor can also be used to monitor the relative humidity. Using the inbuilt timer function, a time-dependent ventilation regime can be set if required.



**SolarVenti®:** SolarVenti® with integrated supply air fan (V1)

**S1:** Collector sensor

#### Note:

The SControl can be subsequently extended with further sensors to the SControl Set 3 (SC3), Set 4 (SC4) or Set 5 (SC5).

## The SolarVenti® Basic Set SC2 consisting of:

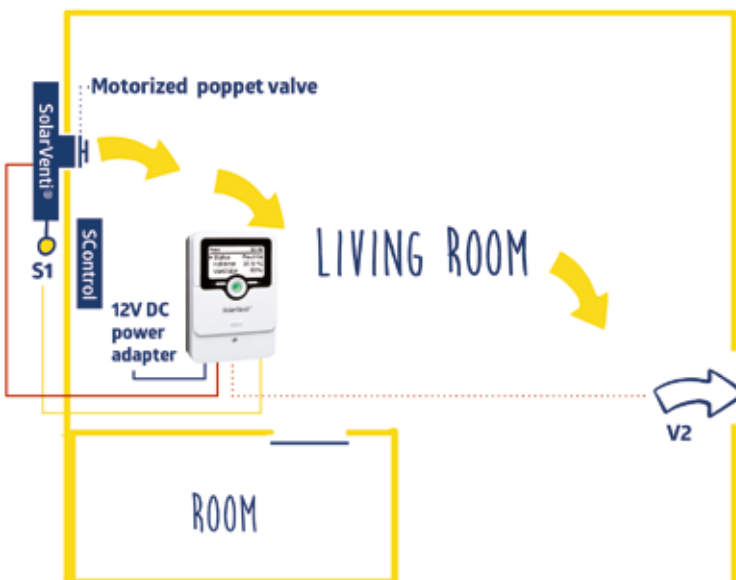
SolarVenti® Air Collector / SControl Set 2 (SC2)

## SolarVenti® - Residential Set SC2

### Living room with supply air and electrical poppet valve, exhaust air via second fan

If the temperature at collector sensor S1 exceeds the set start temperature (factory setting 20° C adjustable), the supply air fan (V1) is switched on. The poppet valve is opened. The living space is ventilated, dehumidified and heated. The exhaust fan (V2) removes the exhaust air outside and ensures a steady flow of air through the building. When the supply air fan is switched off, the poppet valve closes making the supply air opening air tight.

The internal combination sensor in the SControl limits the room temperature to a maximum of 25° C (adjustable) supply fan V1 switches off). Optionally, the internal combination sensor can also be used to monitor the relative humidity. The timer function allows time-dependent ventilation (interval operation) to be carried out.



**SolarVenti®:** SolarVenti® with integrated supply air fan (V1)

**S1:** Collector sensor **V2:** Exhaust fan

#### Note:

The SControl can be subsequently extended with further sensors to the SControl Set 3 (SC3), Set 4 (SC4) or Set 5 (SC5).

## The SolarVenti® - residential house set C2 consisting of:

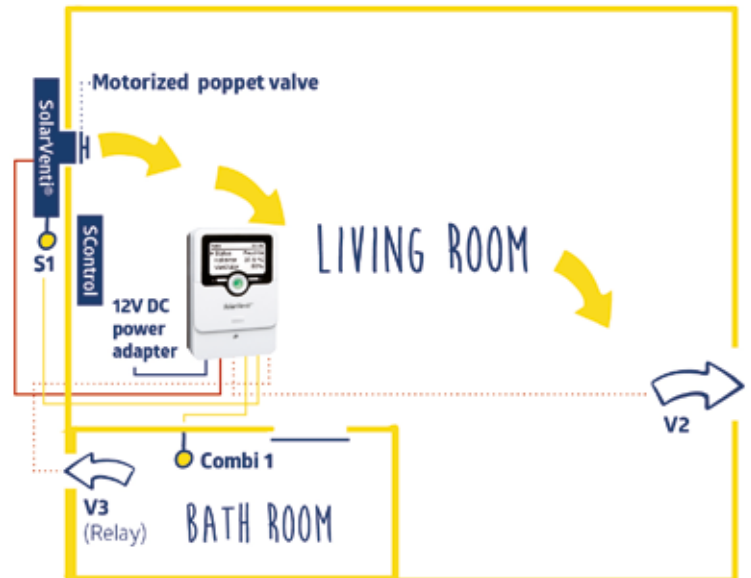
SolarVenti® air collector / poppet valve, motor-driven (2.5 volts) / ventilation set with fan (exhaust air) / SControl set 2 (SC2)

### SolarVenti® - Residential Set SC3

## Living room with supply air and electric poppet valve, exhaust air via second fan, bathroom humidity controlled

If the temperature at collector sensor S1 exceeds the set start temperature (factory setting 20° C adjustable), the supply air fan (V1) is switched on. The poppet valve is opened. The living space is ventilated, dehumidified and heated. The exhaust fan (V2) takes the used air to the outside and ensures a steady flow of air. If the set maximum humidity at the sensor K1 is exceeded, the exhaust fan in the bathroom switches on (V3).

When the supply air fan is switched off, the poppet valve closes the supply air opening airtight. The internal combination sensor in the SControl limits the room temperature to a maximum of 25° C (supply fan V1 switches off). Using the timer function the time-dependent ventilation (interval operation) operates.



**SolarVenti®:** SolarVenti® with integrated supply air fan (V1)

**S1:** Collector sensor **V2:** Exhaust fan **V3:** Exhaust fan bath

**K1:** Combined sensor bathroom

**Note:**

The SControl can be subsequently extended by further sensors to the SControl Set 4 (SC4), Set 4 (SC4) or Set 5 (SC5).

### The SolarVenti® - residential building set SC3 consisting of:

SolarVenti® air collector / poppet valve, motor-driven (2.5 volts) / ventilation set with fan (exhaust air and exhaust air bathroom) / SControl-Set 3 (SC3)

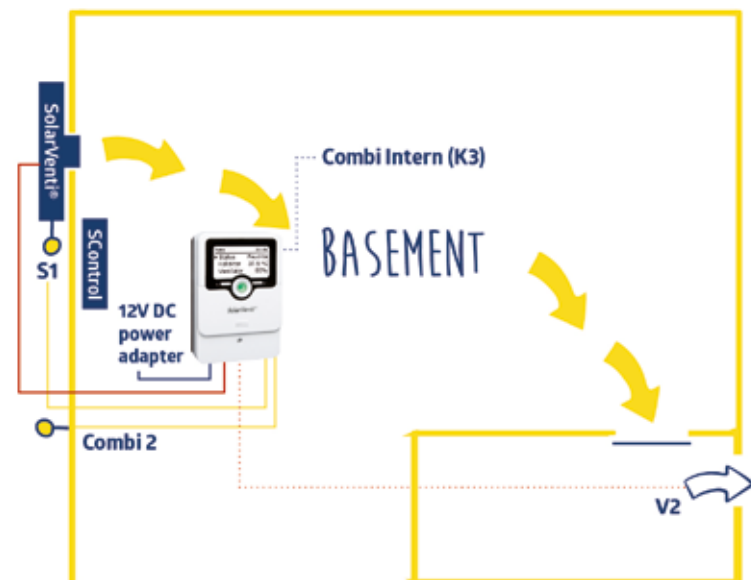
### SolarVenti® - Basement Set SC3

## Basement with supply and exhaust air and dew point control

If the temperature at the collector sensor S1 exceeds the set start temperature (factory setting 10° C), the supply air fan (V1) is switched on. The poppet valve is opened. The cellar is ventilated, dehumidified and heated. The exhaust fan (V2) brings the used air outwards and ensures a steady flow of air.

The internal combination sensor in the SControl limits the room temperature to a maximum of 25° C (supply fan V1 switches off) and monitors the relative humidity in the basement. With the timer function, a time-dependent ventilation (interval operation) is carried out at night.

The dew point lock only allows fan operation if the dew point outside (K2) is lower than the dew point inside (K3 / internal combination sensor). This avoids the condensation of warm outside air on cold basement walls (example: thunderstorm in midsummer)



**SolarVenti®:** SolarVenti® with integrated supply air fan (V1)

**S1:** Collector sensor **V2:** Exhaust air fan

**SControl / Combi Intern (K3):** Dew point inside **K2:** Dew point outside

**Note:**

The SControl can be subsequently extended by further sensors to the SControl Set 4 (SC4), Set 4 (SC4) or Set 5 (SC5).

**Note:**

The SControl Set 4 (SC4) has a second external combined sensor, which can be routed to a more optimal measuring point if required.

### The SolarVenti® - Basement set SC3 consisting of:

SolarVenti® air collector / ventilation set with fan (exhaust air) / SControl set 3 (SC3)

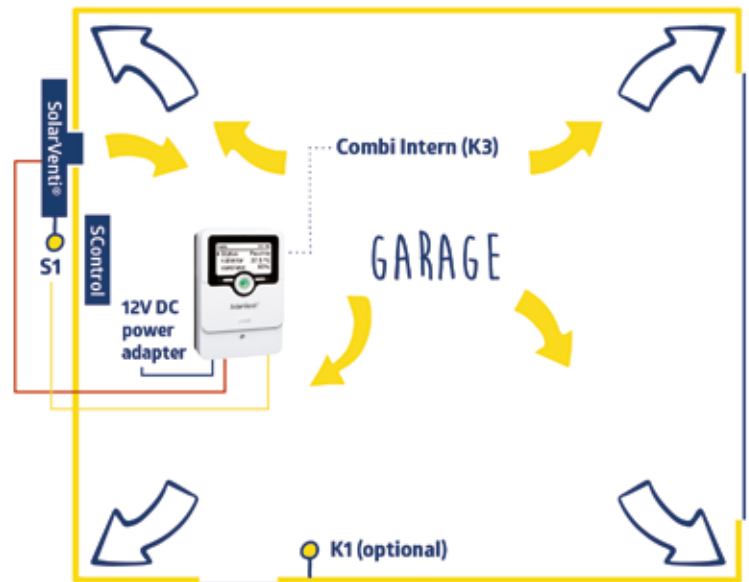
## SolarVenti® - Garage Set

### Garage with supply and exhaust air via the building shell

If the temperature at the collector sensor S1 is higher than the temperature in the garage by the set value (Ton), the supply air fan (V1) is switched on.

The garage is ventilated, dehumidified and heated. The exhaust air escapes through leaks in the garage or through special ventilation devices, such as ventilation grills installed in the in the garage roof. The internal combi-sensor (K3) limits the room temperature in the garage to a maximum of 30° C (supply fan V1 switches off).

If the humidity in the garage increases significantly (for example due to a wet parked car), the humidity control (combination sensor 3) provides forced ventilation to dehumidify the garage. If required, the timer is used for time-dependent ventilation of the garage.



**SolarVenti®:** SolarVenti® with integrated supply air fan (V1)

**S1:** Collector sensor **K1 (optional):** External combi sensor

**SControl / Combi Intern (K3):** Dew point inside

**Note:**

A humidity measurement with the external combination sensor K1 improves the accuracy of dew point measurement. The assignment of the combination sensor must then be made from K3 to K1.

### The SolarVenti® - Garage Set SC3 consisting of:

SolarVenti® Air Collector / SControl Set 2 (SC2)



Further information about the SControl in the product manual

Further information about the SolarVenti® can also be found at [SolarVenti.uk](http://SolarVenti.uk)

## Pre-configured systems make the SControl easy to us

The 5 pre-configured systems allow you to customize your ventilation system individually in the SControl. All functions and parameters are either freely adjustable or changeable by the installer by entering an operator code. Thanks to the integrated relay in the controller, you can also use the SControl for the operation of other end devices and thus expand the system and its capability. Just start with a pre-configured system and then optimize your SolarVenti during operation.

## Store or read systems? No problem!

Configure your own systems and save them on a deployable MicroSD card. The SControl gives each saved configuration its own name. For example, you can set different information settings for summer or winter operation. Installers can easily create an archive of self-designed ventilation concepts via the SControl that can easily be downloaded on site.

## Data recording and software update

Capture relevant readings and data by recording them on the MicroSD card during operation. Likewise, a software update using the MicroSD card is also possible.

## Internet Ready

The SControl has a VBus® Interface and can be read via the Internet with further VBus® accessories (communication module KM2 wifi or datalogger DL2 or DL3). Reading the data is through the VBus.net portal. It will also be possible to gain remote access or integration into the building management system. The ability to read through the only portal VBus.net is subject to a charge.

# Product data

<b>Dimensions</b>	Material Plastic gray-white / 110 x 166 x 47 mm (W x H x D)		
<b>Display</b>	Full graphic display, operation control LED (Lightwheel®), backlight (automatic switch-off)		
<b>Operation</b>	4 buttons and 1 dial (Lightwheel®)		
<b>Mounting</b>	Wall mounting, switch panel possible		
<b>Functions</b>			
- Collector start temperature	- Dew point inhibit room temperature monitoring (maximum room temperature and temperature difference function)	- Frost protecting function	- Timer and interval operation
- Humidity-dependent ventilation		- Collector maximum temperature	- Cooling function
- Fan speed for each function freely adjustable		- Operator code for installers	
<b>Inputs</b>			
<b>Sensor inputs</b>	2 temperature sensors Pt1000 (collector and room), 2 combination sensors (humidity and temperature/dew point calculated), 1 internal combination sensor (humidity and temperature/dew point calculated)		
<b>Power supply solar module</b>	Max. 48 watts / system voltage 12 V= 24A		
<b>Power supply external</b>	100 – 240 V- 1 A / 12 V = 2 A / max. 24 watts DC		
<b>Connection type</b>	X		
<b>Outputs</b>			
<b>Fans-speed controllable</b>	2 12 V outputs speed-controlled for fan (1 of them in parallel operation)		
<b>Relay contact</b>	1 x 0 volt low voltage relay		
<b>DC –Out (additional DC output)</b>	1 DC Out (12 V) (separate from Vent1 + Vent2 running at constant 12 V)		
<b>Power</b>			
<b>Switching capacity</b>	1 (1) A 12 V= (fan)	1 (1) A 12 V= (DC Out)	1 (1) A 30 V= (independent relay)
<b>Total switching capacity</b>	2 A 12 V / max. 24 watts DC		
<b>Standby</b>	< 1 W		
<b>Further</b>			
<b>Hybrid operation</b>	Parallel operation with solar module and external plug-in power		
<b>Supply mode of operation</b>	Typ 1.B.C		
<b>Data interface</b>	VBus®, MicroSD cardslot		
<b>VBus® power output</b>	60 mA		
<b>Degree of protection</b>	IP 20 / DIN EN 60529		
<b>Protection class</b>	III		
<b>Ambient temperature</b>	0 ... 40 °C		
<b>Pollution degree</b>	2		
<b>Warranty</b>	2 years product warranty (manufacturer's warranty)		
<b>Manufacturer</b>	SolarVenti® A/S Denmark		

## SolarVenti®

SolarVenti A/S

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