

Static transducer



Bus interface BACnet MS/TP

## SB05

### CONTROL COMPONENT FOR VAV TERMINAL UNITS, WITH STATIC TRANSDUCER, AN ANALOGUE AND A DIGITAL COMMUNICATION INTERFACE, AND A FAST- RUNNING ACTUATOR

Compact controller made by SAUTER for mounting onto TROX VAV terminal units

- Controller, static effective pressure transducer and actuator in one casing
- Use in ventilation and air conditioning systems, with clean and contaminated air
- For pharmaceutical and laboratory applications
- Configurable basic functions
  - Volume flow control
  - Differential pressure control
- Suitable for constant and variable volume flows
- Analogue interfaces 0 - 10 V DC or 2 - 10 V DC or configurable
- Digital communication interface RS-485 for BACnet MS/TP and SLC (SAUTER Local Communication) protocols
- Parameter setting and commissioning by others with SAUTER software tool

## General information

---

### Application

- All-in-one control device for TROX VAV terminal units
- Static differential pressure transducer, electronic controller and fast-running actuator are fitted together in one casing
- Choice of various control options based on project-specific settings (by others)



- Existing connections can be used differently depending on project-specific settings (by others), for example:
- Volume flow rate actual value as a network data point or voltage signal
- Damper blade position as a network data point or voltage signal

Area of application according to manufacturer (SAUTER):

- Supply air and extract air flow control
- Differential pressure control in supply air and extract air ducts
- Room pressure control

For more information please refer to the product details or the manufacturer's documentation

Special features

- For various applications
- Requires adaptation (by others) to the actual application
- With a second control circuit for duct pressure and room pressure
- Supports SLC (SAUTER Local Communication) protocol for configuration, SAUTER system integration and connection of control panels
- Configurable analogue and digital inputs and outputs
- Controller casing with integral fast-running actuator
- BACnet Application Specific Controller (B-ASC)

Constructions

SB05 with Compact controller ASV215BF152E for VAV terminal units:

- TVR, TZ-Silenzio, TA-Silenzio, TVZ, TVA, TVRK
- TVJ (all sizes)
- TVT up to size 1000 × 300 or 800 × 400 mm

Parts and characteristics

- Static differential pressure measurement independent of the installation position
- Integral actuator, fast-running, running time 3 - 15 s for 90° (can be set with the software)
- Clamping device and gear release button
- Terminals and RJ12 socket
- RS-485 communication interface, not galvanically isolated

Commissioning

- No factory setting by TROX because with this control component relevant parameters cannot be protected from being changed later
- Required by others: adaptation to terminal unit, application type setting, interface configuration and setting of operating parameters

Required products for commissioning

- SAUTER CASE VAV, PC software for configuration and commissioning (can be downloaded from [www.sautercontrols.com](http://www.sautercontrols.com))
- RS-485 interface adapter

## TECHNICAL INFORMATION

Specification text, Order code

---



### Category

Compact controller for volume flow rate or room or duct pressure

### Application

Control of a constant or variable volume flow rate or pressure setpoint. Electronic controller for applying a reference value and capturing an actual value signal. Stand-alone operation or integration with a central BMS.

### Area of application

Static transducer for contaminated air in ventilation and air conditioning systems

#### Installation orientation

Any installation position, zero point can be corrected

#### Connection

2 terminal blocks and 1 RJ12 socket (bus)

#### Supply voltage

24 V AC/DC

#### Interface/signalling

- 2 RS-485 bus interfaces, not galvanically isolated, for BACnet MS/TP or SAUTER SLC protocol
- 5 configurable I/O signals including 3 × AI/AO, 1 × DI/DO, 1 × DI

#### Interface information

Connections can be configured as required, for example:

- Analogue inputs: for reference value, setpoint value change
- Analogue outputs: for volume flow rate actual value, damper blade position, effective pressure
- Switch input DI: for load shedding
- Switch output DO: for lighting or alarms
- Communication interface RS-485: BACnet MS/TP (BACnet Application Specific Controller (B-ASC) and SAUTER SLC (configuration, SAUTER system integration and connection of control panels)

#### Special functions

Parameter setting for volume flow rate control, room pressure control, duct pressure control; this function may require an optional component

#### Parameter setting

- Complete parameter setting (by others) for adaptation to the VAV terminal unit and for the project-specific use of inputs and outputs, functions and operating parameters
- Only with SAUTER commissioning software and interface adapter.

Control component SB05 (shown together with TVR as an example)

TVR - D - P1 - / 200 / D2 / SB05  
| | | | | | | |  
1 2 3 4 5 6 7

1 Type

TVR VAV terminal unit

2 Acoustic cladding

No entry: none

D With acoustic cladding

3 Material

No entry: galvanised sheet steel

P1 Powder-coated RAL 7001 (silver grey)

A2 Stainless steel construction

4 Duct connection

No entry: push-fit, suitable for ducts according to EN 1506; with groove for optional lip seal

FL Flanges on both ends

5 Nominal size [mm]

100, 125, 160, 200, 250, 315, 400

6 Accessories

No entry: without accessories

D2 Double lip seal both ends (push-fit only)

G2 Matching flanges for both ends (only with FL)

7 Attachments (control components)

SB05 Compact controller with static transducer, fast-running actuator, configurable application type; interface: analogue, BACnet MS/TP or SLC

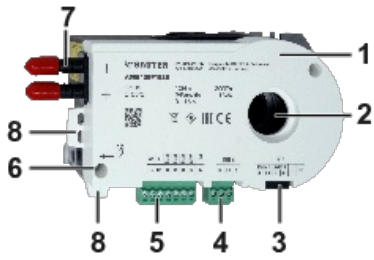
Order example: TVR-D-P1/200/D2/SB05

Type	TVR
Acoustic cladding	With acoustic cladding
Material	Powder-coated RAL 7001 (silver grey)
Duct connection	Push-fit, suitable for ducts according to EN 1506; with groove for optional lip seal
Nominal size [mm]	200
Accessories	Double lip seal both ends
Attachments (control components)	SB05 - Compact controller with static transducer, fast-running actuator, configurable application type; interface: analogue, BACnet MS/TP or SLC

Complete parameter setting (by others) for adaptation to the VAV terminal unit and for the project-specific use of inputs and outputs, functions and operating parameters. Only with SAUTER commissioning software and interface adapter.

Parameters specific to the terminal unit and the size are given in the installation and commissioning manual as well as on a silver sticker on the product.

## Compact controller SB05



- 1: VAV Compact controller
- 2: Clamping device
- 3: RS-485 interface with RJ12 socket
- 4: RS-485 interface with screw terminals
- 5: Screw terminals for supply voltage, input signals and output signals
- 6: Gear release button
- 7: Effective pressure tube connections
- 8: Strain relief for cables

Technical data, Product details, Manufacturer data



## Compact controllers for VAV terminal units

VAV terminal units	Type of installation component	Part number
<b>TVR, TVJ, TVT, TZ-Silenzio, TA-Silenzio, TVZ, TVA, TVRK</b>	ASV215BF152E	A00000069859

Compact controller SB05, ASV215BF152E

<b>Type of measurement/installation orientation</b>	Static, measurement range up to 300 Pa, independent of the installation orientation
<b>Supply voltage (AC)</b>	24 V AC $\pm 20\%$ , 50/60 Hz
<b>Supply voltage (DC)</b>	24 V DC, $-10\%$ - $+20\%$
<b>Power rating (AC)</b>	Up to 20 VA
<b>Power rating (DC)</b>	Up to 11 W
<b>Torque</b>	10 Nm
<b>Connections</b>	<ul style="list-style-type: none"> <li>• 2 x RS-485 bus interface with RJ12</li> <li>• Terminals</li> <li>• RJ12 socket</li> </ul>
<b>Analogue interface (optional)</b>	0 - 10 V DC or 2 - 10 V DC or user-specific (adjustable)
<b>Digital communication interface</b>	<ul style="list-style-type: none"> <li>• Bus interface RS-485 (not galvanically isolated)</li> <li>• BACnet MS/TP and SLC (SAUTER Local Communication) protocols</li> <li>• Addressing by others, 31 devices max.</li> </ul>
<b>IEC protection class</b>	III (protective extra-low voltage)
<b>Protection level</b>	IP00, IP30 only with additional protection kit
<b>EC conformity</b>	EMC to 2014/30/EU
<b>Weight</b>	0.8 kg

The information given here is just to give you an idea.

For the latest information on the electronic attachments please refer to the technical data in the manufacturer's product documentation

Fr. SAUTER AG

[www.sauter-controls.com/produkt/volumenstrom-kompaktregler-fuer-labor-und-pharmaanwendungen/](http://www.sauter-controls.com/produkt/volumenstrom-kompaktregler-fuer-labor-und-pharmaanwendungen/)

[www.sauter-controls.com/en/product/vav-compact-controller-for-laboratory-and-pharmaceutical-applications/](http://www.sauter-controls.com/en/product/vav-compact-controller-for-laboratory-and-pharmaceutical-applications/)

[www.sauter-controls.com/fr/produits/regulateur-compact-vav-pour-laboratoires-et-applications-pharmaceutiques/](http://www.sauter-controls.com/fr/produits/regulateur-compact-vav-pour-laboratoires-et-applications-pharmaceutiques/)

## Product details

### Commissioning

TROX VAV terminal units with the SB0S attachment must be parameterised and commissioned by the customer for the intended application.

The following settings must be made:

- Parameters for adapting the control component to the TROX VAV terminal unit
  - E.g. nominal flow rate, orifice factor (K value) or effective pressure at nominal flow rate
  - For specific parameters regarding the terminal unit and the dimensions, see the installation and commissioning instructions or the product label
- Setting for the desired function of the control component and the interfaces
- Operating values for the application area such as  $q_{vmin}$  and  $q_{vmax}$
- If necessary, communication setting for operation in a communication network

Important:

The PC software available free of charge from SAUTER and the appropriate interface adapter are required for commissioning the control component by the customer.

## Manufacturer's notes and data

### Reference to the manufacturer's details

The product documentation of the control component is relevant for the range of functions and technical data

Type ASV215BF152E of Fr. SAUTER AG

For further information, please consult the detailed manufacturer's documentation such as product data sheet and installation and commissioning instructions on the manufacturer's website.

- Technical data
- Function and application description
- Dimensions and dimension drawing
- Block diagram
- Electrical connecting cable core identification and sample wiring
- Accessories
- Commissioning and required software tools

Manufacturer of the control component:  
Fr. SAUTER AG

Website:

[www.sauter-controls.com/produkt/volumenstrom-kompaktregler-fuer-labor-und-pharmaanwendungen/](http://www.sauter-controls.com/produkt/volumenstrom-kompaktregler-fuer-labor-und-pharmaanwendungen/)

[www.sauter-controls.com/en/product/vav-compact-controller-for-laboratory-and-pharmaceutical-applications/](http://www.sauter-controls.com/en/product/vav-compact-controller-for-laboratory-and-pharmaceutical-applications/)

[www.sauter-controls.com/fr/produits/regulateur-compact-vav-pour-laboratoires-et-applications-pharmaceutiques/](http://www.sauter-controls.com/fr/produits/regulateur-compact-vav-pour-laboratoires-et-applications-pharmaceutiques/)

