

## Techconnet BlowOff – Type BO 2.1 HDBV 24 V DC LOG

Automatic Air Blast System for Aspiration Smoke Detectors

### Installation guide

Current state: December 2016



Certified by VdS according to DIN EN 54-20

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**TECHCONNET** ■ FOCUS ON FIRE PROTECTION

**Note**

Technical specification/ Installation guide  
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## 1. Technical data of BlowOff BO2.1 HDBV 24V DC LOG

<b>Blow Off module</b>	compatible to all professional ASD with one sensor pipe, upgradeable
<b>Casing</b>	Metal /IP 65/ RAL 7035 structure, door, double lockable
<b>Electrical connections</b>	24 V DC; from 0.08 to 2.5 mm <sup>2</sup>
<b>Power consumption</b>	Normal: approx.: 2,2W/24V= 91mA Max.: approx.: 5,2W/24V=215mA
<b>Valves</b>	Electronical (Festo) – control and blow off Pneumatical (Festo) three-way ball valve 1"– main line
<b>Compressed air connection</b>	with quick-coupler, max. 7.0 bar, technically oil free and dry
<b>Compressed-air reservoir</b>	Buffer in case of pressure failure for resetting the three-way ball valve
<b>Pipe connections</b>	easily accessible from outside / can be quickly installed
<b>Probe tube / suction pipe</b>	Adapter from a diameter of 28 mm to 25 mm
<b>Input contacts</b>	- Deactivate air-blast / purge process controller
<b>Output contacts</b>	- Potential-free signalling contact (to fire control panel/ ASD) - Contact for operating status
<b>Protection class</b>	SKI earthed
<b>Type of protection</b>	IP 65 standard version Complete protection against contact with live parts, spraywater-tight in all directions and dust-free
<b>Work area</b>	-5° C to +40° C without heater -20° C to +40° C with heater (optional)
<b>Mounting</b>	simple wall mounting with external brackets (4 wall drillings with M8 dowels)
<b>Dimensions</b>	W x H x D 380 x 600 x 210 in mm
<b>Installation</b>	interior applications under normal environmental conditions, no acid content in ambient air
<b>Control unit</b>	Internal PLC (Siemens LOGO),  <b>Time schedule:</b> via internal PLC factory-set: 4 times per day (1:00 am, 7:00 am, 1:00 pm, 7:00 pm)
<b>Optional:</b>	
<b>Control cabinet heating</b>	variable, integrated, with thermostat

## 2. Installation and fixing

The air-blast system is installed between aspiration smoke detectors and sensor pipe system.

**2.1** The air-blast system is tightly fastened with dowels and screws to the four prepared mounting lugs on the wall.



**2.2** The blow-off system is connected with adapters 28 mm / 25 mm to the external, standard plastic piping on top and bottom. Two adapters are supplied with each device.



**2.3** Compressed air is connected by means of the quick coupler located at the bottom of the housing.

**Notice!** The compressed air connection must be fed with dry and technically oil-free compressed air (**ISO8573-1:2010, class 1.5.2**) of max. 7.0 bar pressure – depending on sensor pipe length.

**Continuous supply of compressed air of min. 4.0 bar must be ensured.**

## 3. Electrical connections

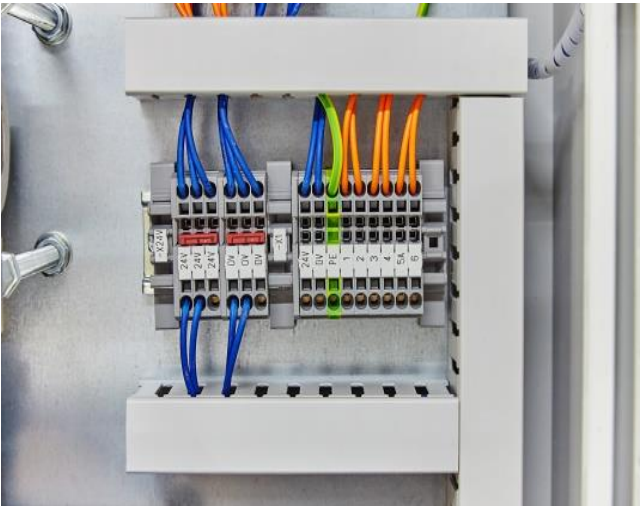


Wiring and power supply are provided through the cable bushings located at the bottom.

The BlowOff system is operated with 24 VDC.



- 3.1** Use the 3 mm two-way key to open the casing door above and below.  
A key is supplied with every unit.



- 3.2** Connect 24 V and 0 V and, if necessary, the PE protective conductor (green/yellow) to the power supply connectors.
- 3.3** Connect the contacts as indicated in the terminal connection diagram enclosed.

The potential-free output contacts are used for operational monitoring and can be assigned individually as required.

## 4. Setting blow-off times

- 4.1** Air-blast times are pre-programmed at the factory according to a time schedule.  
Standard : 4 times per day: 07:00; 13:00; 19:00;  
01:00 am

## 4.2 Changing cleaning times

This requires the following input in the Siemens LOGO:

1. Press ESC at the unit until the menu is displayed.
2. Use the arrow keys to select the parameters and press OK to confirm.
3. The first block is shown (time switch 1). Use the arrow keys to change the time and press OK to confirm.
4. Select the next block (time switch 2) in the same way)
5. Change the time as described above and press OK to confirm

Then press ESC, ESC to return to on-going operation.  
The new switching times are active immediately.



## 5. Switching on the BlowOff

- 5.1** Use the 3 mm two-way key to close the casing door above and below.



- 5.2** Turn the external “on” button to the “on” position.



- 5.3** The "Operation 24V" pilot lamp is located on the top of the casing. It lights when the device is switched on.

The BlowOff is ready for operation.

## 6. Functioning of the BlowOff air-blast system

The air is sucked from the sensor pipe system through the air-blast system to the ASD for early fire detection.



A top quality, 1 inch, 3-way ball cock (FESTO) is used to avoid loss of suction pressure as a result of flow resistance at valves.



Oil-free, compressed air is fed into the BlowOff system through a universal coupling G 1/4. In non-operating state, it is permanently present at the control valves. Upon the air blast, the 1 inch valve shuts off air intake. The pneumatic valve opens with a short delay and leads compressed air through the sensor pipe for approx. 20 seconds. Dirt and dust deposits are thus blown out of the system. The pneumatic valve subsequently closes again. When the pneumatic valve is closed, the suction valve opens again and the ASD again sucks air from the now cleaned sensor pipe system. This process is repeated at the the pre-programmed times.

If a fire alarm or a pre-alarm is indicated to the BlowOff system via **terminal 6** (24 V signal) either before or during the cleaning process, cleaning is suppressed or stopped immediately for as long as the signal is available plus a closing lock-out of 20 min.

The operational monitoring of BlowOff is signalled permanently via a potential-free make contact at **terminals 3 and 4**. In the event of a power failure or of an operational failure of the PLC, the air-blast system is disabled and the signal is output via the potential-free make contact at **terminals 3 and 4**.

Regular cleaning is carried out automatically.

The cleaning process active message must be signalled to the fire control panel via a potential-free make contact at **terminals 1 and 2** during the entire blow-off cycle in order to reset the "low air flow" error message of the ASD (due to the closure of the intake side during blow off) or disable this message for the period of cleaning.

## **7.Terminal diagram BO 2.1 HDBV 24V DC LOG**

Supplied with the unit