Flow control

Q-Flow Compact

The most basic control panel, yet provides all the functions necessary to fulfil the EN 14175-2 requirements. Simple layout with a LED flow indicator, excessive sash opening notification and two buttons stand for easy operation.

The Q-Flow Compact is available with the following functionality:

– flow monitoring with optical and acoustic signalling of insufficient airflow
– LED bar graph displaying the current flow rate
– sash opening height of >50cm monitoring and signalling
– monitoring and signalling of alarm states
– "Night mode" - for monitoring work with reduced flow rate (lower minimum flow speed alarm level)
– switch for fume cupboard lighting operation

Q-Flow

Fitted as standard in most of our fume cupboards offers great cost-efficiency and expanded functionality. LED indicators combined with LCD display create an ergonomic and easy to use interface with many useful functions and additional options to be configured according to your needs. Many timer options and direct control over fume cupboard's elements make it the most advanced controller in terms of convenience and functionality.

The Q-Flow monitoring system fulfils the requirements of EN 14175-2 standard.

The Q-Flow is available with the following functionality:

– flow monitoring with optical and acoustic signalling of insufficient airflow
– LCD display showing the air flow rate in m3/h and current time when in standby mode
– sash opening height of >50cm monitoring and signalling
– monitoring and signalling of alarm states
– "Night mode" - for monitoring work with reduced flow rate (lower minimum flow speed alarm level)
– output for external alarm signalling devices (optional)
– fume cupboard lighting switch with timer
– battery backup with battery protection
– battery work control LED
– timer with acoustic signalling
– different buzzer sounds for different alarm states
– 230V sockets control switch with programmable switch-off time (optional)
– ventilation fan power-on control
– connections for in-room temperature and humidity sensors
– connections for workspace temperature and humidity sensors (caution - sensors not
– resistant to aggressive work environment)

Q-Flow Touch

An alternative version of the Q-Flow monitoring system, fitted with a high-tech 5" LCD touch screen. Provides exactly the same functionality as Q-Flow with a standard control panel, but thanks to the large-size display makes the operation and readout even easier. It is also compliant with the EN 14175-2 standard.

The Q-Flow and Q-Flow Touch can be equipped with additional safety systems - Manual protect or Auto protect.

Schneider FM100

The basic monitoring and alarm system for exhaust flows from a well-known manufacturer, provides information on the airflow and sash status and control over some of the fume cupboard's features. An acoustic and optical alarm is activated as soon as the exhaust flow falls below or exceeds the programmed threshold values. Large, legible panel and an RS232 service plug make it an easy to use and programmable solution.

FM100 fulfils the EN 14175 standard.

The Schneider FM 100 is available with the following functionality:

- flow monitoring of exhaust air with optical and acoustic signalling of insufficient airflow
- programming of all system values via service module SVM100 or computer software
- PC2000
- EEPROM memory for safe data storage during power failure
- sash opening height of >50cm monitoring and signalling
- monitoring and signalling of alarm states
- fume cupboard lighting switch
- service plug for programming
- ventilation fan power-on control
- night-time functioning mode
- battery backup (optional)

This system is also available as **Schneider FM100E** - an EX version of the FM 100. It provides the same level of protection, with optical and acoustic signalling of insufficient airflow, but the controls have been limited to the "alarm reset" button and two signalling lights. The system is cased in an EX-proof housing. The RS-232 service plug may optionally be installed in a steering cabinet outside of the EX zone.

Schneider FC 500

A microprocessor based system for control and monitoring of fume hood exhaust air volume flow or face velocity in relation to the front sash and slide window opening. Thanks to a measuring tube with adjustable damper, the containment-safety of the fume hood is guaranteed in all sash opening positions while at the same time ensuring minimal air consumption. This improves operator safety and helps reduce the running costs of a fume cupboard.

The Schneider FC 500 is available with the following functionality:
- flow monitoring of exhaust air with optical and acoustic signalling of insufficient airflow
- flow monitoring of intake air with optical and acoustic signalling of insufficient airflow
- air volume flow regulation (10:1 range)
- high-speed, predictive control algorithm
- reaction time and upward regulation of the exhaust air volume flow ≤ 2 sec (VMIN → VMAX)
- programming of the downward regulation control time for the exhaust air volume flow ≤ 2...24 sec (VMAX → VMIN)
- static differential pressure transmitter 3...300 Pa (optionally 8...800 Pa) with high longterm stability for measuring the exhaust air actual value (volume flow)
- maintenance-free measuring tube with two ring chambers and self-cleaning effect
- linear sash position sensor for stable, error-free measurement of the vertical front sash opening
- internal functional monitoring of all sensors for plausibility
- emergency operation (override) = VOVERRIDE
- night-time operation (reduced operation) = VNIGHT
- control behaviour after a power failure freely programmable
- programming of all system values via service module SVM100 or computer software PC2000
- EEPROM memory for safe data storage during power failure
- linear sash position sensor with visual and acoustic
- optical and optionally acoustic alarm for the operating status "Sash position > 50cm"
- monitoring and signalling of alarm states
- fume cupboard lighting switch
- service plug for programming
- ventilation fan speed control
- night-time functioning mode
- battery backup (optional)
- air volume flow display (optional)

Schneider iCM

A microprocessor based system for control and monitoring of fume hood exhaust air volume flow or face velocity in relation to the front sash and slide window opening. The iCM also incorporates a measuring tube with adjustable damper, which ensures containment-safety of the fume hood in all sash opening positions while at the same time minimizing air consumption. The standard version of iCM controller has a dynamic air flow sensor that gives information regarding the flow required to keep a constant face velocity.
The "E2" extension for iCM is optional. This allows to connect a static differential pressure

transmitter with an integrated Venturi tube and a sash position sensor. Such sensor set makes it equal in functionality to the FC500 controller.

What makes the iCM the most advanced air flow controller in the range is its ability to work with room group controllers and ability to directly actuate room supply air controllers or ventilation fans. This possibilities, combined with an active room ventilation system can create the most efficient and cost-effective laboratory air system.

The Schneider iCM is available with the following functionality:

Standard model

- flow monitoring of intake air with optical and acoustic signalling of insufficient airflow
- air volume flow regulation (10:1 range)
- high-speed, predictive control algorithm
- reaction time and upward regulation of the exhaust air volume flow ≤ 2 sec (VMIN → VMAX)
- programming of the downward regulation control time for the exhaust air volume flow ≤ 2...24 sec (VMAX → VMIN)
- emergency operation (override) = VOVERRIDE
- night-time operation (reduced operation) = VNIGHT
- programming and read out of all system values via the service module SVM100 or computer software PC2500
- full graphic LCD screen
- EEPROM memory for safe data storage during power failure
- numerical and bar graph display of the air input velocity in m/s or ft/min
- optical and optionally acoustic alarm for the operating status "Sash position > 50cm"
- monitoring of supply air and exhaust air systems

With optional add on system -E2

- integrated power supply 230V AC
- separate terminal board for for simple cable connection and fast commissioning
- static differential pressure transmitter 3...300 Pa (optionally 8...800 Pa) with high longterm stability for measuring the exhaust air actual value (volume flow)
- maintenance-free measuring tube with two ring chambers and self-cleaning effect
- linear sash position sensor for stable, error-free measurement of the vertical front sash opening
- Internal functional monitoring of all sensors for plauzibility

Additional systems

Manual protect

Consists of a motion sensor monitoring the presence of the operator in front of the fume cupboard, sash height sensor and a signalling LED on the control panel. If no motion is recorded in front of the fume cupboard for a defined time and the sash is open, the LED begins to flash, signalling that the sash should be lowered for improved safety. This is available only with Q-Flow and Q-Flow Touch.

Auto protect

Consists of a motion sensor working similarly to the one in Manual protect, sash height sensor and an electric motor capable of moving the sash. If no motion is recorded in front of the fume cupboard for a defined time and the sash is open, the motor closes the sash to improve safety and limit the required air flow, what helps reduce the running costs. A light barrier in the sash stops the movement if any obstacles, protruding through the sash opening are found. This may also be used to stop the sash by hand. The system has three operating buttons - "Up", "Down"and "Stop", all positioned on the side panel. These can be used to move the sash, although the system also incorporates movement initialisation by sliding the sash by hand. The Auto protect is available with every control system.