



QUIET



CLEAN



SAFE

## The LabSystem for laboratory ventilation

- Inexpensive lab ventilation offering maximum reliability



Air outlets  
Air-water systems  
Ventilation grille  
Fire protection  
Noise absorption

Master control system  
Living room ventilation  
Shut-off devices

Regulation equipment  
Filter diffusers

**Laboratory  
ventilation systems**



# LabSystem

## Top reliability and accuracy

Can be integrated into a master control (GLT) system via LON

### Inexpensive regulation of exhaust air extraction from laboratories—with LON networking as an optional extra:

- Path potentiometers ensure stable regulation.
- rapid shutter adjustment (90° adjustment in 3 sec.).
- maintenance-free Venturi measuring equipment with plastic PPs control shutter.
- separate terminal and main boards.
- LON networking optional, user-defined topology.
- optical (and if required) acoustic warning system for operating status "Front valve position > 50 cm"
- closed-loop control circuit.

### Benefits offered by the LON-based lab ventilation system:

- LON networking ensures maximum flexibility and reliability. Integration into a building's master control system (GLT) enables complete monitoring and control of ventilation procedures in all laboratories.
- simple to install and enlarge
- networking at field level via LonWorks, data transmission to automation level via BACnet



VRA-E air intake and extraction controller



Components of FC-500 Lab Air Extraction Regulator

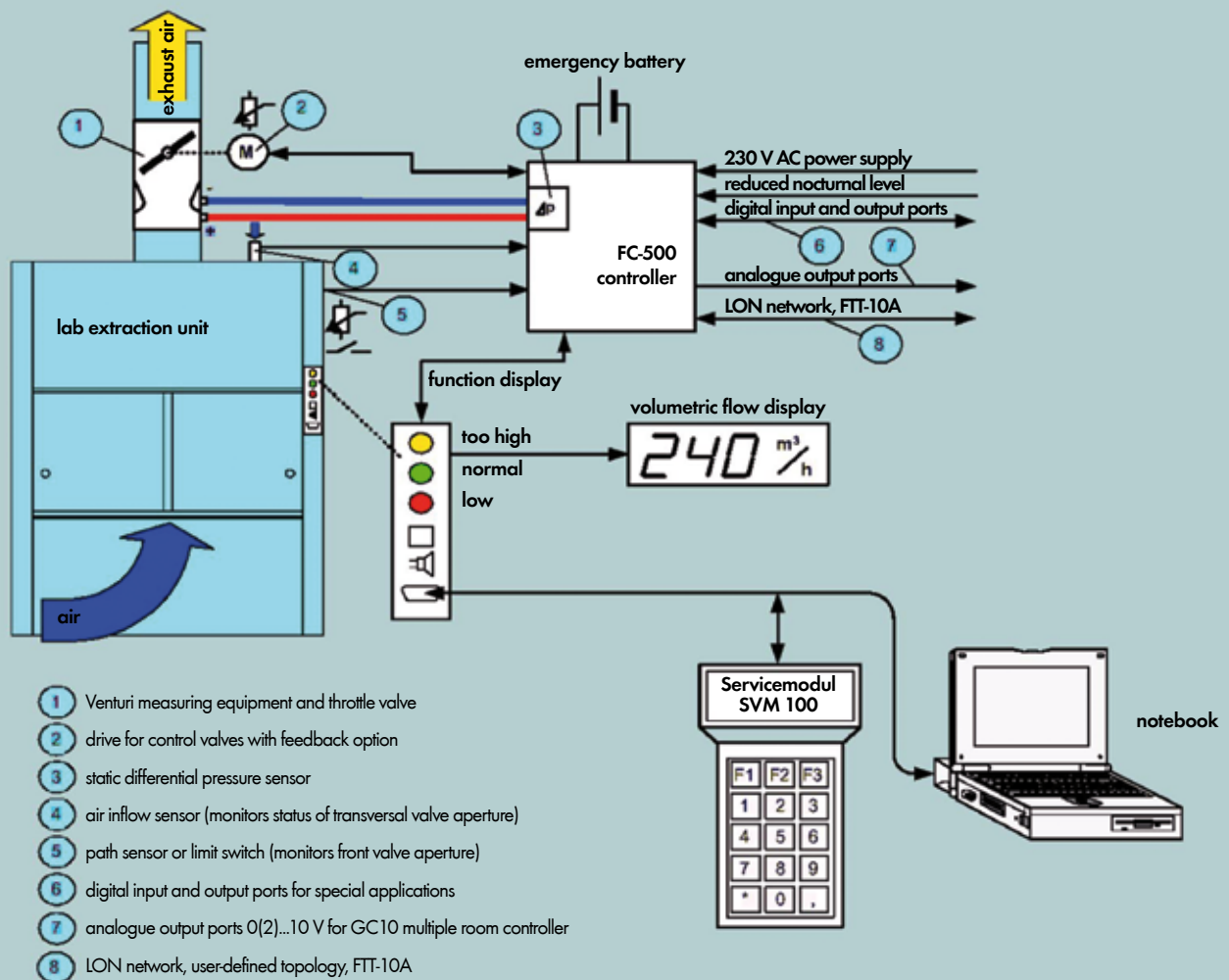


Lab air extraction unit

# LabSystem

Can be connected to standard lab furniture supplied by a number of different manufacturers.

Block diagram for FC-500 Lab Air Extraction Controller



The vertical position of the front valve aperture is monitored by the path sensor and the horizontal position by the air flow sensor to calculate and regulate the volumetric flow of exhaust air. The front valve aperture thus calculated is used as the target standard for regulating volumetric flow. A quick-acting regulation algorithm performs ongoing control of this target setting against actual data supplied by a differential pressure sensor. This ensures quick, accurate and reliable regulation of the volumetric flow of exhaust air, which is not influenced by pressure fluctuations in the duct network. The corresponding advance volumetric requirement for exhaust air is calculated and entered immediately as a target figure. This cuts the time needed for optimal regulation of lab air (e.g. VAV volumetric air intake regulator).

# LabSystem

The labsystem is suitable for use with all types of air extraction units.

## References from users of the laboratory

### ventilation system:

- RWTH Aachen, Inorganic Chemistry Dept.
- BASF Limburgerhof, Agrarian Centre
- Karlsruhe Research Centre, extension building 330
- Revitalisierungsgebäude Mainz
- IHIS Trier
- Grünenthal GmbH, Building 401, Isotope Laboratory
- Biocampus Cologne
- Biocentre Würzburg, converted animal quarters
- Agrar- und Umweltanalytik Jena
- Schering Berlin, Building S 106
- Schering Berlin, Building S 106
- Klinikum St. Georg Leipzig, renovated Pathology Dept., Building 1
- University of Essen
- RWTH Aachen, German Wool Research Institute
- Allgemeines Verfügungszentrum II Bonn
- Oberursel Primary School
- Solarwatt Dresden
- Science Park Saar II Saarbrücken
- University Clinic Jena, ZZMK, Los 3
- Lycée Technique Michel Lucius Luxemburg
- IWU Dresden
- Polymer Latex Marl, 1st floor North of office and laboratory building
- Odersun Frankfurt/Oder
- DELO Windach
- HLUG (BHZ) Wiesbaden

## Installation diagram

