

GRUNER ACTUATORS

# THE FIRST SAVINGS BOX WITH A RETURN ON INVESTMENT.

Gruner itaMAX – the system solution for energy-optimised  
comfort ventilation cuts costs and flow noise





GRUNER IS DEFINITELY NOT IN THE BUILDING MANAGEMENT BUSINESS. BUT OUR SOLUTIONS HELP DESIGNERS, ARCHITECTS AND HVAC ENGINEERS TO DELIVER EFFICIENT AUTOMATION.

# THE UNIVERSAL SOLUTION FOR VENTILATION SYSTEMS IN BUILDING AUTOMATION



## REDUCED COSTS – IMPROVED COMFORT

Whether in new-builds, retrofits or the renovation of existing buildings, mechanical ventilation systems with heat recovery deliver a continuous supply of fresh air and create a pleasant interior atmosphere. However, they frequently consume an excessive amount of power. There is no need for that any more, not with itaMAX by Gruner – a unique plug & play system that reduces pressure losses while also optimising the power and speed of fans.



## CLEAR BENEFITS FOR VENTILATION SYSTEMS

- › Power savings of up to 70 %
- › Great economy when used for supply and exhaust air
- › Enormous time saving through automatic commissioning
- › Substantial reduction in flow noise
- › Standardised solution for use in new-builds and for simple integration in existing building automation systems

# EVERYTHING SIMPLY WELL CONTROLLED

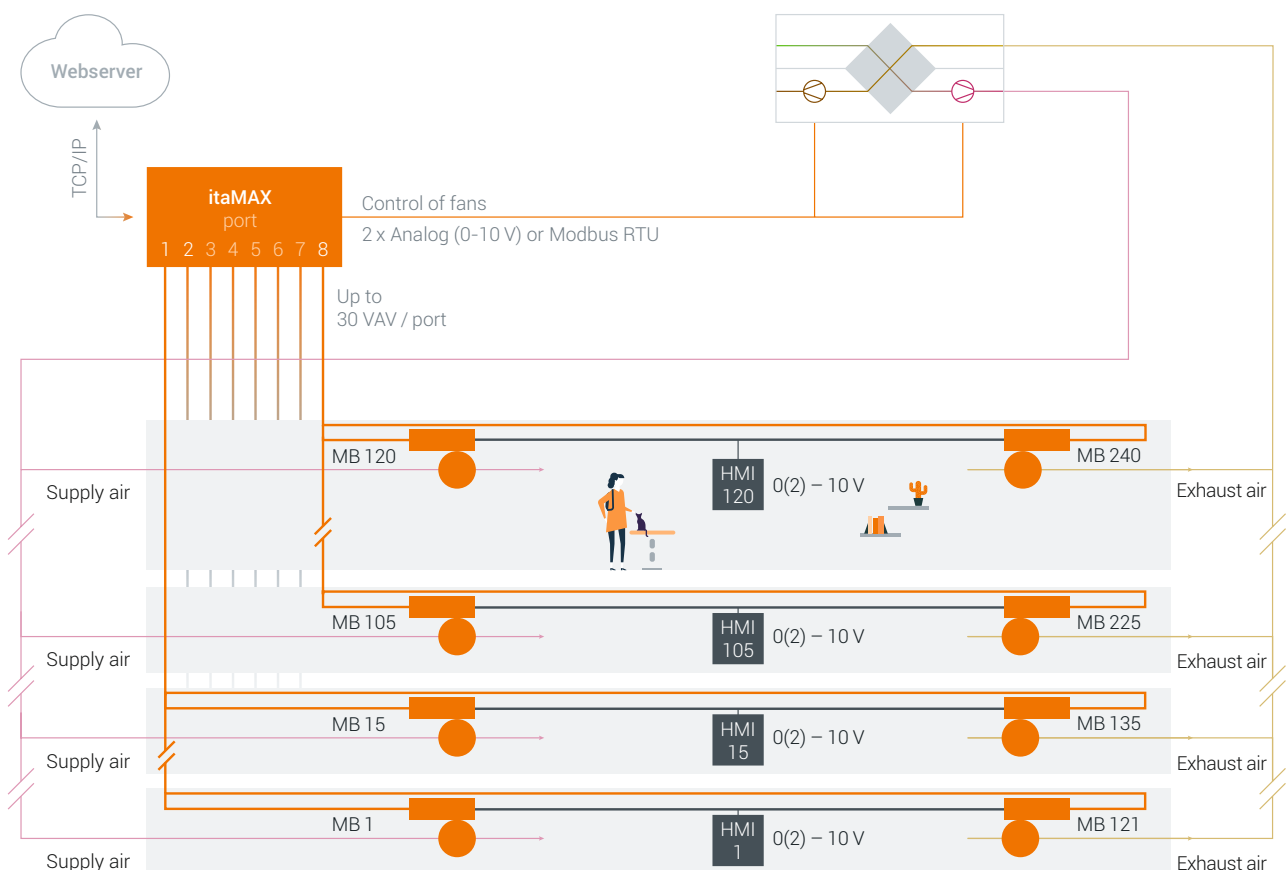
Either as a gateway or a standalone solution: Gruner itaMAX delivers tangible cost benefits and a power saving of up to 70 % compared to conventional mechanical ventilation systems. This is because Gruner itaMAX controls up to 240 volumetric flow controllers, and the controllers for supply and exhaust air can be connected up to the same line. The assignment is made via the Modbus address and a specifically developed algorithm calculates the nominal values for the supply and exhaust air fans depending on the damper position of the controllers.

## GOOD FOR SMALLER BUILDINGS!

The room controllers (temperature, humidity, VOC, motion detectors ...) are connected directly and locally to the VAV controllers. The fans (EC fans) are either activated directly by an analogue signal (0-10V) or by itaMAX via Modbus RTU.

## ADVANTAGES

- Inexpensive solution for smaller buildings
- Free-of-charge remote maintenance and continuous access via web server
- Fast commissioning with plug & play



STAND ALONE



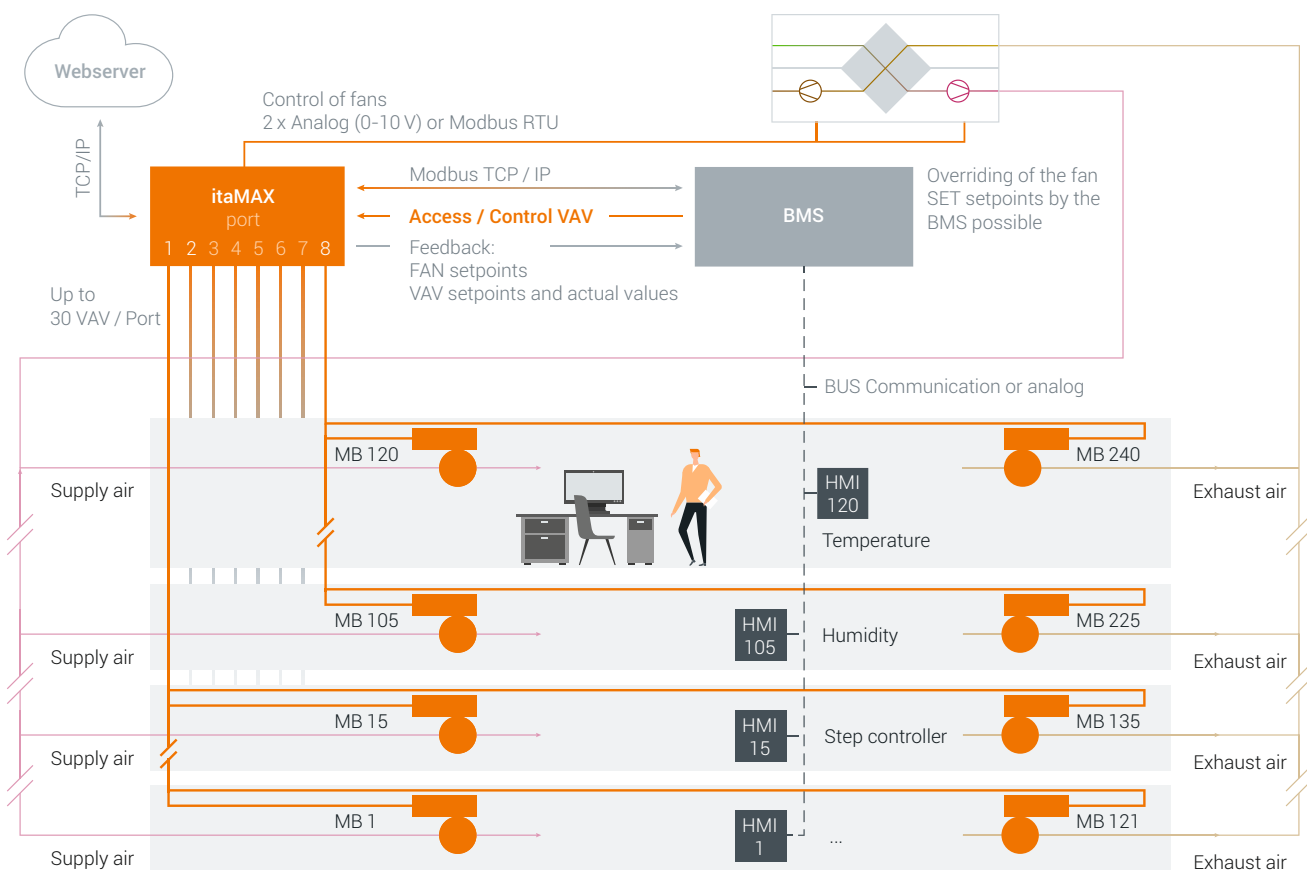


## IDEAL FOR DIRECT CONTROL OF THE FANS

Using an analogue signal (0-10V), demand signals are transmitted from the itaMAX to the fans directly or via frequency converter or using Modbus RTU.

## THE ADVANTAGES OF THE itaMAX GATEWAY ...

- Central overview of all interior conditions – all **ACTUAL** values are recorded in the BMS.
- Simple maintenance, fast troubleshooting, quick replacement of field devices – the BMS has read & write access to each individual volumetric flow controller.



# THE BMS IS THE BOSS

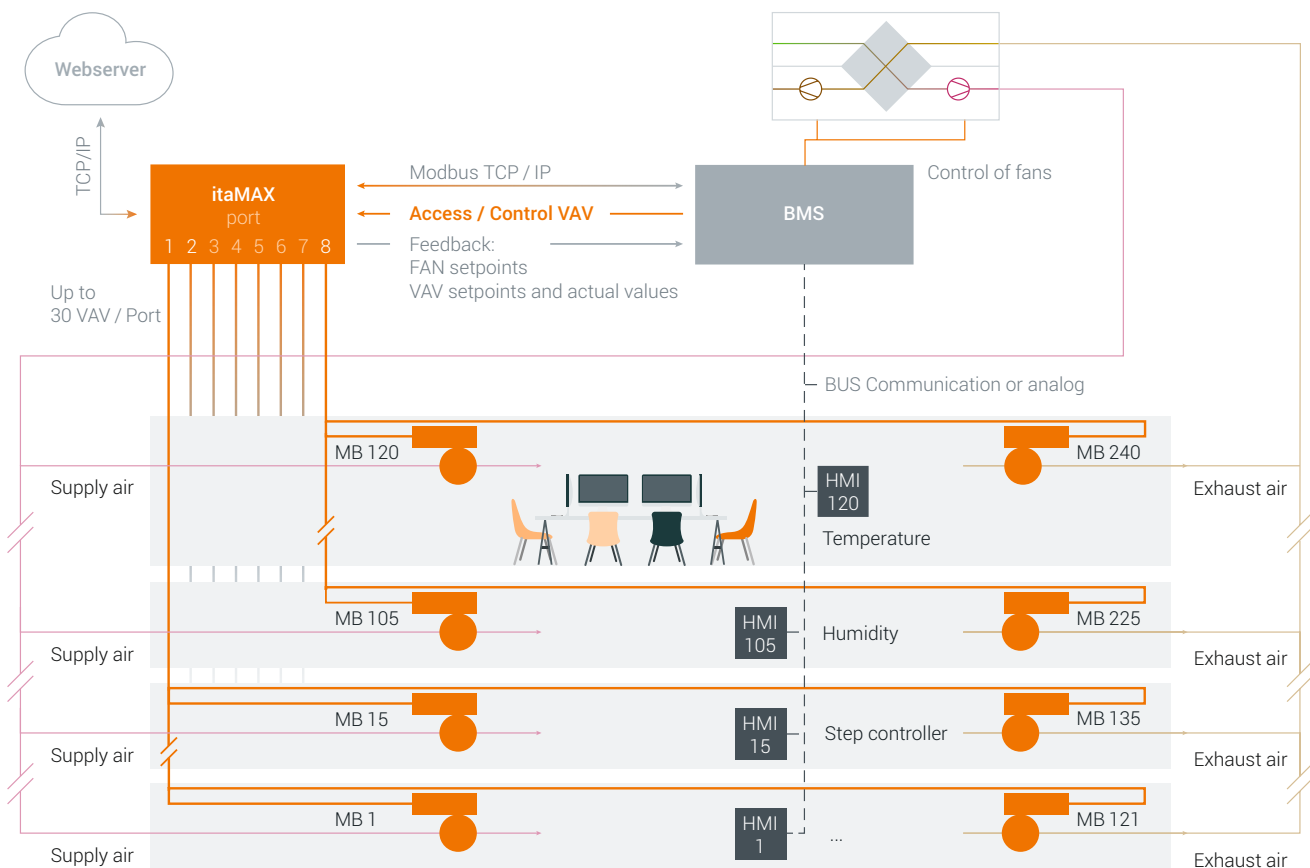
As a gateway application, itaMAX ensures that the BMS has an overview of all values and is able to override the nominal fan values at any time.

## ... IN COLLABORATION WITH THE BMS

- > The BMS is the master of building management – the nominal values computed by itaMAX can be overridden at any time.
- > Less wiring, more information – the room operating devices can be implemented as bus components.

## OPTIMUM INFORMATION FOR CONTROL VIA THE BMS

Using the Modbus TCP/IP interface, demand signals are transmitted via BMS to the fans.



# SAFE, ECONOMICAL AND COMFORTABLE – AUTOMATION THROUGH itaMAX

## SIMPLE PLUG & PLAY

- › All that is required is to set the fan parameters – and itaMAX takes charge of operation automatically!
- › No need for tough and time-consuming programming.
- › Remote diagnostics and maintenance via a web interface
- › itaMAX is easy to install.

## SPECIAL ALGORITHM

- › For control purposes, various parameters are recorded, such as the prevailing damper positions of all VAV boxes for supply and exhaust air.
- › The demand signal of the room controller (temperature, humidity, VOC ...) can be connected directly to the local VAV box or can be transmitted to the itaMAX via Modbus TCP/IP using the building management system (BMS).
- › The itaMAX algorithm was specifically designed to control the supply and exhaust air fans.

## TAILOR-MADE POWER SUPPLY

- › With itaMAX, fan power can be adjusted to the effective demand.
- › The system only supplies the air that is actually needed.
- › itaMAX combines comfort and cost-effectiveness.

## MAXIMUM FLEXIBILITY

- › Convincing migration capability: using standardised interfaces and protocols, itaMAX can be incorporated universally in existing building management systems (BMS).
- › Fans can either be activated via Modbus RTU or by an analogue 0–10 V signal.
- › itaMAX is designed for up to 240 individual VAV controllers.

# COST SAVINGS AT THE PRESS OF A BUTTON

## POWER SAVINGS OF UP TO 70 % FOR VAV VENTILATION SYSTEMS

- > Control of supply and exhaust air fans in a compact system
- > Intelligent control of fan speed for maximum comfort and minimum pressure loss
- > The demand signal generators of the room controller (temp.; humidity, VOC ...) can be connected directly to the local VAV controllers.
- > Gateway applications: with Modbus TCP/IP connection to the building management system (BMS)
- > Not much wiring needed: Modbus RTU can be used to interconnect up to 240 supply and exhaust air controllers on the same line.
- > Central parameterisation is possible



PLUG & PLAY



GRUNER AG, headquartered in Wehingen with around 1,500 employees, based in Germany, Tunisia, Serbia and India, is a major manufacturer of actuators, relays and solenoids. Our system solutions for building management, the automotive industry and medical technology are in demand around the world, featuring compelling innovation and quality.

**GRUNER AG**

Bürglestraße 15-17 | 78564 Wehingen | Germany

T +49 7426 948-0 | F +49 7426 948-200

info@gruner.de | www.gruner.de