

Movement by Perfection



The Royal League in ventilation, **control** and drive technology

# UNIcon

Smart and intelligent control solutions

## Intelligent Control Modules

### Smart and intelligent control solutions thanks to system control intelligence

ZIEHL-ABEGG is the only manufacturer who develops and produces its own control devices for fans and motors.

UNIcon control modules measure the system values controlling power components such as frequency inverters or EC fans on this basis. There are several options available: From multifunctional devices to sensor control modules specially designed for refrigeration or air-conditioning applications.

UNIcon control modules can be used for the control of individual or multiple fans.

### UNIcon takes care of the process control function

For the typical applications of our customers, pre-set operating modes can be selected. The appropriate sensors are connected depending on the application.

Within the framework of process control functions, groups of EC fans on a condenser can be speed controlled. Besides the option of communicating with fans via MODBUS RTU and also of automatically addressing them (MODBUS master function), UNIcon also provides two 0–10 V interfaces to control EC fans or power components.

A further interface via MODBUS RTU enables the output of data (operating status, runtimes, electrical data, etc.), for example, to a building control system.

## UNIcon with systems competence

### UNIcon multifunctional universal control module

Pre-set operating modes for process control in our customers' applications.



Externally controllable



Pressure control in refrigeration



Temperature control functions



Control of differential pressure/air volume in air-conditioning



Air speed control



Further control options, air humidity, CO<sub>2</sub>, etc.

## Product Series Overview



### UNIcon sensor control module for air-conditioning

Differential pressure sensor and control intelligence combined in one device. Can be used in roof fans, close control air handling units and similar applications. Digital display and differential pressure or air volume flow control.

### UNIcon sensor control module for refrigeration

Pressure sensor and control intelligence in a single unit. Can be used for refrigerant pressure control on condensers and in similar applications. Analogue display and refrigerant pressure control.

### UNIcon multifunctional universal control module

All ZIEHL-ABEGG sensors can be combined with this device. Quick start-up with pre-set operating modes. Thanks to its extensive range of features (e.g. real-time clock with timer function, two separate control circuits, MODBUS master function, etc.), the product can be used in a wide variety of applications. Measured values and other information are displayed via the integrated multifunction display.

# Smart control solutions

## Refrigeration with CBG sensor control module

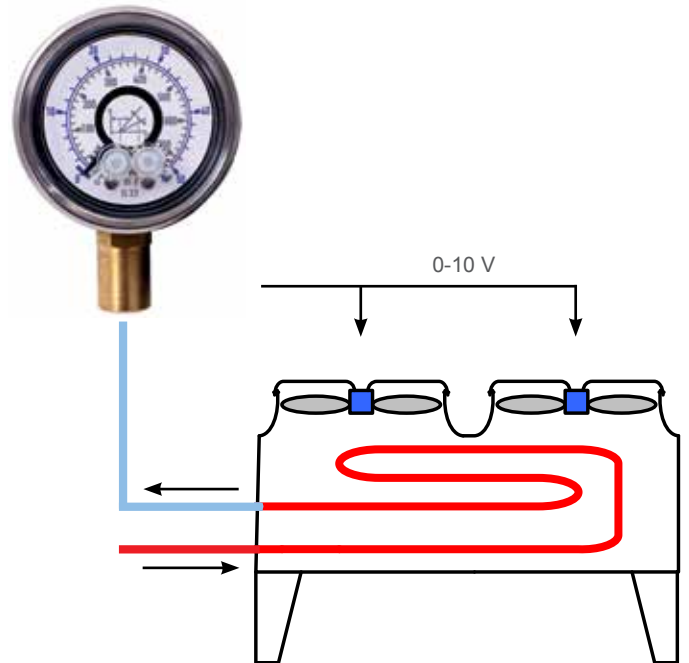
### UNICon sensor control module – refrigeration

- Sensor and control intelligence in a single unit
- Pressure measurement and control in condensers
- Integrated analogue display and direct nominal value setting on device
- 10 V supply from ECblue or frequency inverter, 0-10 V control signal back to ECblue or frequency inverter
- Simple wiring
- Easy start-up
- Excellent price-performance ratio

### Application

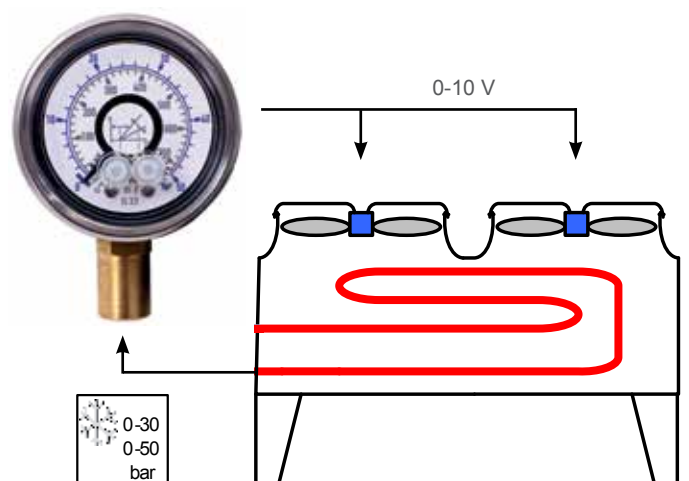
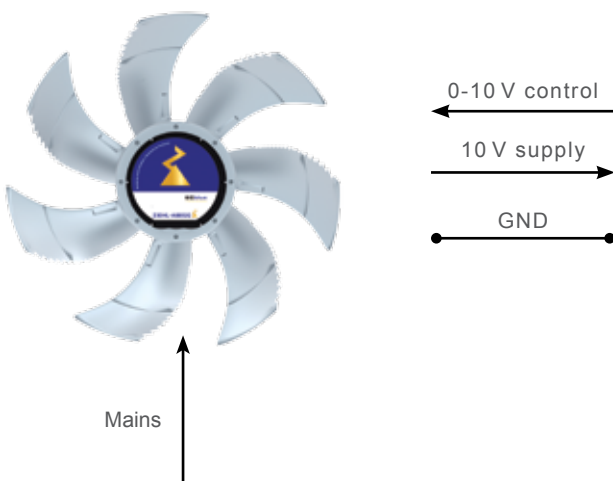
The UNICon sensor "CBG" control module is equipped with a female screw thread compatible with Schraeder valves, enabling measurement of refrigerant pressures directly from condenser headers.

The desired pressure and control range can be easily adjusted with an integrated potentiometer. The 0-10 V signal resulting from the adjusted pressure, controls ECblue fans or frequency inverters to meet the required cooling demands. In this way, complex devices can be controlled with the compact CBG sensor control module.



*Pressure sensor and control intelligence in a single unit  
Direct control of fans in refrigeration*

## The simplest way to control condenser fans



*Example: ECblue fan and CBG sensor control module*

# Air-conditioning with CPG sensor control module

## UNICon sensor control module - air-conditioning technology

- Sensor and control intelligence combined in one device
- Measurement and control of differential pressure in roof fans or central air-conditioning units
- Integrated digital display and direct nominal value setting on the device
- 10-24 V supply from ECblue or frequency inverter, 0-10 V control signal back to ECblue or frequency inverter
- Nominal value switching is possible (e.g. between day and night mode)
- Simple wiring
- Easy start-up, selectable operating modes
- Excellent price-performance ratio

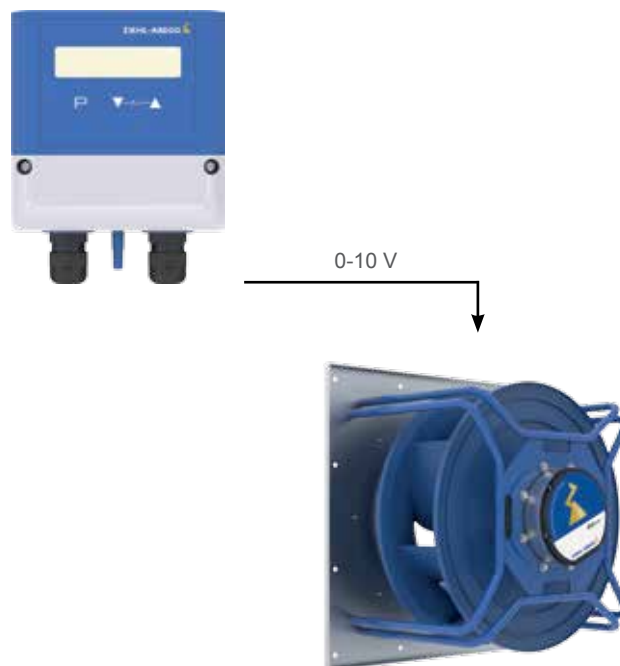
### Application

The UNICon "CPG" sensor control module is connected to the ventilation system via two pressure connections to monitor differential pressure. Using integrated buttons, the desired function can be easily selected and the required nominal value and control range can be set.

### Selectable functions

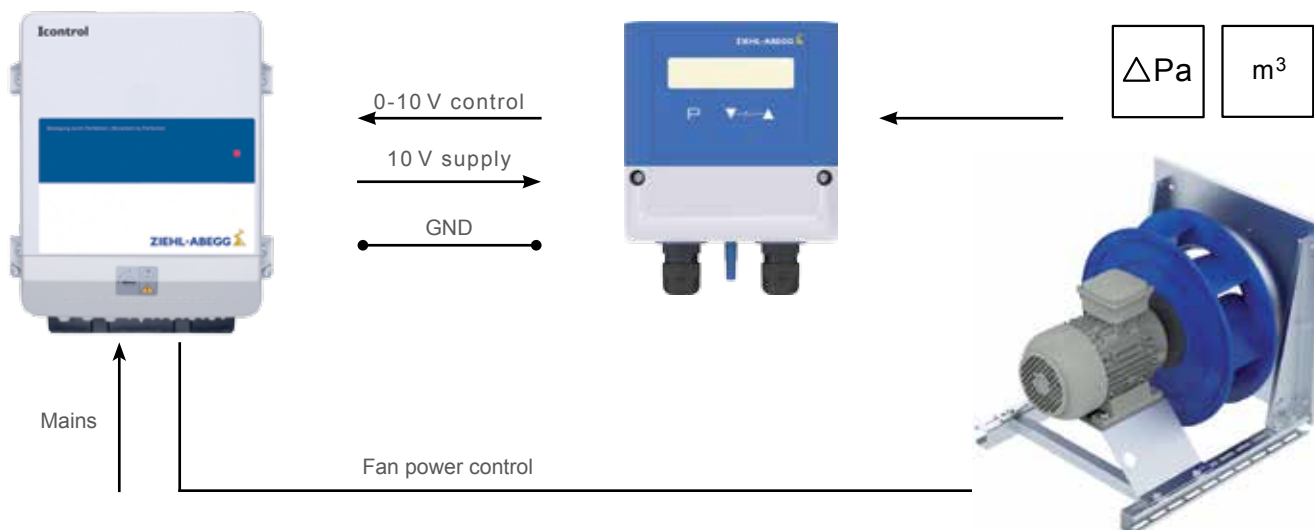
- Differential pressure control
- Air volume control via K factor input
- Optional use as a sensor

The 0-10V output signal controls ECblue fans or frequency inverters as required.



Pressure sensor and control intelligence are combined in one device Direct control for ventilating fans and for air-conditioning technology

## The simplest way to control fans in air handling units



Example: Combination with Icontrol Basic frequency inverter

# Universal control module

For a variety of application areas

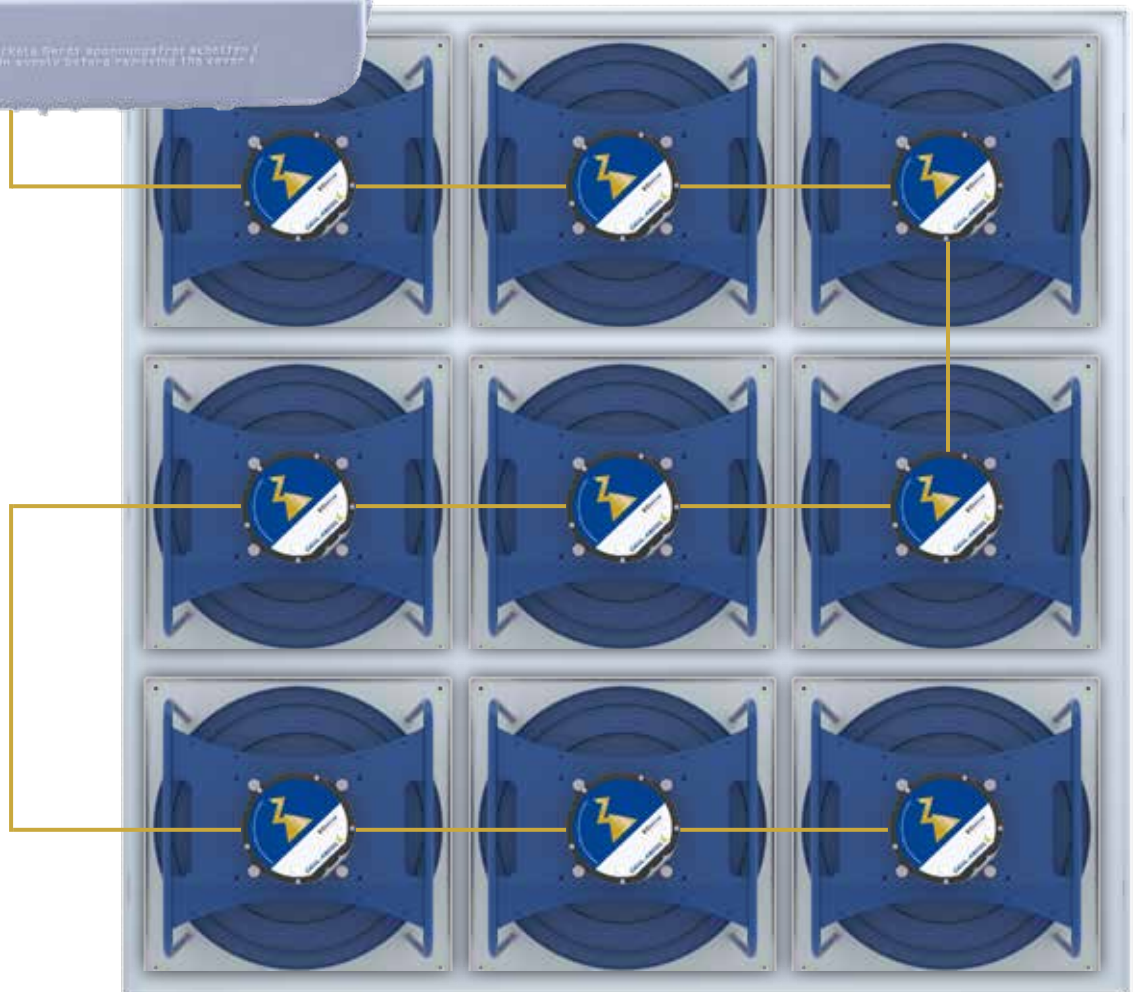
## UNIcon universal control module

Thanks to easily selectable pre-set operating modes, UNIcon can be used in a variety of applications. Furthermore, all ZIEHL-ABEGG sensors can be combined with the universal control module.



### Fan control in air-conditioning technology by a modular system solution:

Parallel operation of centrifugal fans, for example, in a modular system solution. Control can be linked to differential pressure. On this basis, the air volume can be controlled by entering the K factor of the inlet bellmouth into the UNIcon.



## Application examples:

- Refrigeration
- Air-conditioning
- Clean rooms
- Ventilation



## Fan control on condensers or coolers:

UNIcon controls the parallel operation of axial fans, including those working in groups. Control can be linked to either the refrigerant pressure or a direct temperature measurement. In the case of refrigerant pressure based control, refrigerant values saved in the device can be used for a conversion into temperature.



# The Royal League

