

Movement by Perfection



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

Fcontrol & Icontrol

Frequency inverter with system capabilities

Fcontrol & Icontrol

Perfect coordination for optimum performance and energy-saving control

ZIEHL-ABEGG is the only fan manufacturer who develops and builds its own products in the field of fan speed control.

Frequency inverter with system competence: perfectly coordinated for optimum performance. No frequency inverter is better adapted and parametrised for ZIEHL-ABEGG motors than the Icontrol or Fcontrol: everything you need from a single source for every application.

Special focus is put here on the simple handling of ZIEHL-ABEGG frequency inverters. This guarantees fast start-up and saves money. The multifunctional Icontrol & Fcontrol from the "FXDM" type series feature pre-set operating modes. Depending on the application, the desired operating mode is simply selected during the start-up process.

All Fcontrol & Icontrol frequency inverters from ZIEHL-ABEGG are equipped as standard with IP54 compliant housing. This allows for a direct installation without the need for a control cabinet, even outdoors, for example on air-conditioning units or directly on refrigerating system coolers outside on roofs.

Fcontrol

Suitable for:

- External rotor motors
- Parallel operation of fans
- Long cable lengths + unshielded motor cables
- Motors that are not optimised for operation with frequency inverters
- Retrofitting
- Quiet outdoor fan operation (e.g. refrigeration)

Icontrol

Suitable for:

- IEC standard motors (internal rotor motors)
- Individual fan operation in air handling units
- Control of MAXvent axial fans
- Generally for frequency inverter compatible motors/fans
- Low investment costs

Frequency inverter with system competence

Multifunctional Fcontrol & Icontrol.

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



Can be controlled externally



Control of differential pressure/air volume in air-conditioning technology



Pressure control in refrigeration



Air speed control



Temperature control functions



Further control options, air humidity, CO₂, etc.



Basic frequency inverter – modular expansion options

Fcontrol & Icontrol Basic.

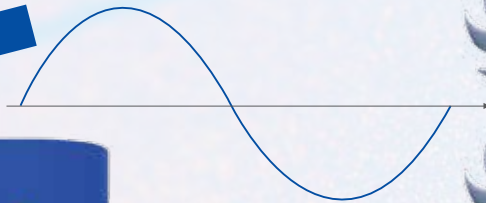
The frequency inverters are factory-set speed controllers. Modular expansion options are available according to the required functionality. The versions without display can be easily integrated into bus networks through plug-in add-on modules, with the option to upgrade to process control functionality.

Add-on modules are available for the following networks

- MODBUS
- CANopen
- LON
- PROFIBUS
- EtherCAT

Fcontrol & Icontrol

For every application purpose



Fcontrol

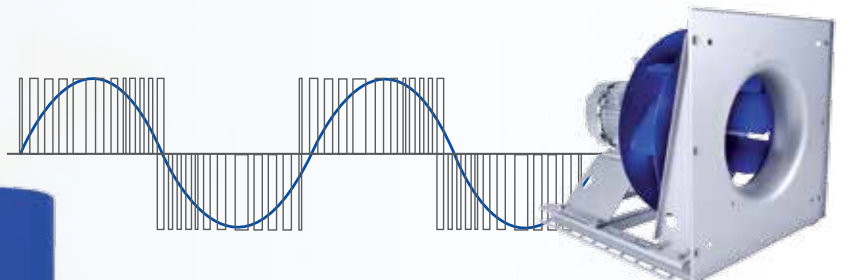
Special frequency inverters that meet the highest demands

With its integrated sine filter, the Fcontrol is a unique frequency inverter with a sinusoidal output voltage. Comparable to the power supply, the Fcontrol controls motors without an increased load on the winding insulation and the motor bearings. Motors are operated quietly, gently and safely, regardless of the cable length.

Fcontrol pure innovation:

- Optimised frequency inverter for motors connected in parallel mode and for long motor cables
- Sinusoidal output voltage (through integrated sine filter), similar to mains supply. Therefore no "stress" for connected motors
- Quiet motor operation – without the whistling noise typical of frequency inverters
- Motors are conserved: the insulation of windings is not burdened by voltage peaks. Motor bearings are not damaged by bearing currents. This means that motors and fans do not need to be optimised for frequency inverter operation
- IP54 housing, suitable for outdoor installation (e.g. in air handling units installed outdoors)
- Motor cables do not need to be shielded and their length is not restricted by the Fcontrol

simple plug & play installation



Icontrol

More than a standard frequency inverter – established technology to control IEC standard motors

In comparison to conventional frequency inverters, Icontrol offers the benefit of creating a coordinated system with our fans. Selectable operating modes and custom pre-set motor data offer key advantages, e.g. for air handling units: Quick start-up, maximum performance and highest efficiency.

Icontrol – improved standard performance:

- Particularly economical control of fans with IEC standard motors
- Suitable for outdoor installation thanks to IP54 housing (e.g. in central air-conditioning units installed on the roof)
- With pre-settings for the assigned fan available on request
- Plug & play
- With optional integrated main switch
- Operation with shielded motor cable

Fcontrol Basic & Icontrol Basic

Intelligent frequency inverters for fans, tailored to your needs

Basic frequency inverters for demand-based and energy-saving speed control

Frequency inverters must be flexible in order to satisfy requirements in a diverse range of applications.

With the new Fcontrol Basic and Icontrol Basic, you have products that can be used flexibly. The modular expansion options ensure intelligent solutions with the best price-performance ratio.

Simple implementation of process control functions

Examples:

- **Refrigeration:** Control of cooling fans on condensers or coolers
 - **Air-conditioning technology:** Control of air flow rate in central air-handling units and roof fans
- UNICon sensor control modules with integrated control intelligence can be easily combined for this.



Fcontrol Basic



Icontrol Basic



Fcontrol Basic with integrated display



Icontrol Basic with integrated display



Icontrol Basic with integrated display and main switch



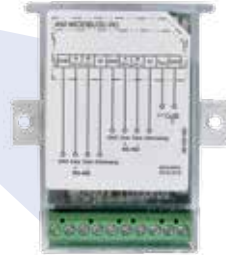
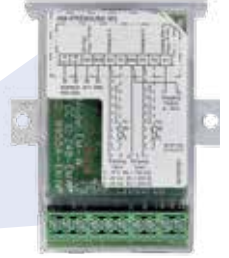
Further options with control modules are possible in any combination



Display



Remote control with display



Add-on expansion modules

Combinations with all versions possible



Combination



UNIcon sensor control module CPG can be combined for process control in air conditioning and ventilation



UNIcon sensor control module CBG, can be combined for process control in refrigeration (refrigerant pressure)



UNIcon multifunctional universal control module for a wide range of process control functions

The Royal League

