Frequency inverters

3~ Icontrol, universal controller with display

The Icontrol frequency inverters are provided preferably for the requirement-based and energy saving speed control of internal rotor motors (IEC standard motors).
All ZIEHL-ABEGG sensors can be combined with the universal frequency inverters. The actual value measured at the sensor is compared with the setpoint. This results in activation of the connected fan. It can be controlled to air flow or differential pressure especially for application in air conditioning. Simple start-up is possible with the selectable operating modes available in the device.
Processes in other application areas can also be controlled. The frequency inverters can be used flexibly.

0-10V — Setting of the desired speed through device or by external default, e.g. 0…10 V

0 - 435 0 - 725 psi — Connecting pressure sensors (refrigeration), e.g. type MBG.. sensors, measuring range 0-435 psi, 0-725 psi

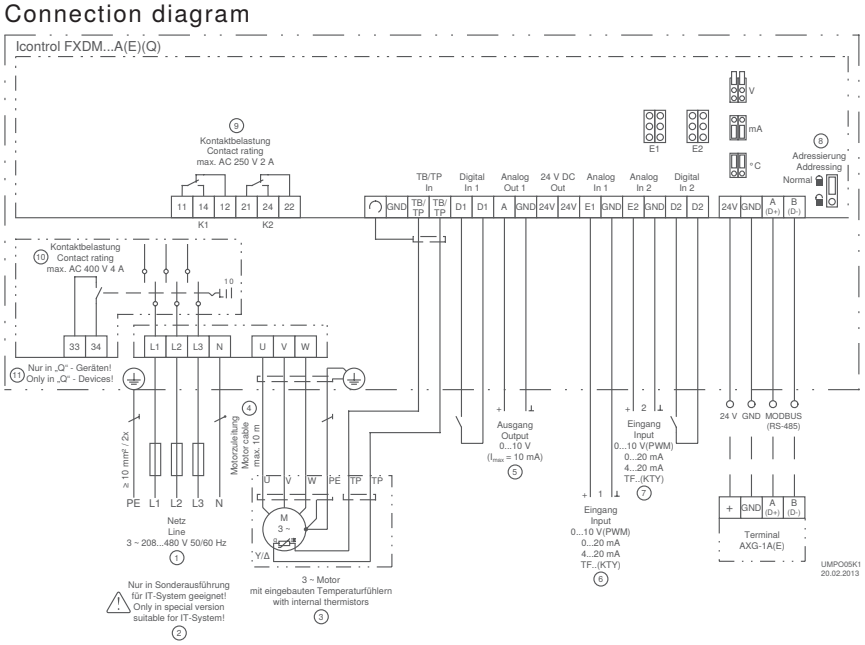
°F — Connection of thermistors,
e. g. sensors type TF..
e. g. active sensor type MTG..

in.wg — Connecting differential pressure sensors (air conditioning), e.g. type MPG.. sensors, measuring range 0-24.09 in.wg, acquisition of volume flows up to 38,258 CFM

ft / s — Connecting air velocity sensors, e.g MAL.. type sensors, measuring range 0-3.28 ft/s, 0-32.8 ft/s

CO_2 % °F — Connecting additional sensors, e.g. combination sensors, CO_2, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



① Mains
② 3~ motor with thermistors
③ Motor supply line
④ Output
⑤ Input 1
⑥ Input 2
⑦ Addressing
⑧ Max. contact rating
⑨ Max. contact rating

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/characteristics:

Multifunctional display with plain text:
Various menu languages can be selected

Simple commissioning through operating modes:
Typical operating modes, e.g. for air-conditioning, refrigeration or ventilation technology can be selected.

Easy to program:
Typical settings can be made: e.g., default a minimum rotational speed, limit the maximum rotational speed, inverting and limits. Setting, e.g. for 2-stage mode

2 analogue inputs for sensors or set-point signals:
Analogue input E1 and E2: Setting through operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA
Analogue input E2: programmable, e.g. comparison to Sensor 1, difference Sensor 1, average calculation, set-point input, set-point adjustment (e.g. dependent on outdoor temperature)

2 digital inputs D1 and D2:
Programmable, e.g., enable function, switching Nominal value 1 or 2, switching control or manual operation, switching E1 or E2, reverse control function, limitation output, display external malfunction, reset, reverse the rotary direction

1 analogue output A1:
Setting through operating modes or manually programmable, e.g. e.g. output signal proportional control, output signal proportional input signal, invertible, 10 V fixed voltage, group control

2 digital outputs (relays) K1 and K2:
Setting through operating modes or manual programming, e.g. operating status, limits, external fault on digital input, enabling external devices, e.g. heating, dampers, group control of fans, etc.

Integrated motor protection function:
Connection facility for PTC thermistors or alternatively thermal contacts (TB or TP).

Interface RS485 MODBUS RTU:
Integration into bus system

Settings protection:
Enable settings protection from unauthorised access, restore implemented settings

Event memory:
Query events that have occurred, operating times, etc.

The Icontrol frequency inverters are also available with an integrated main switch.

Type designation FXDM...AQ
The integrated main switch has the switch positions 0 and I (On/Off). In position 0 the switch can be locked with a padlock. An integrated auxiliary contact can be used to indicate the switch position. This enables you to recognise whether the switch has been actuated, for example, when a fault indication relay drops out.

Add-on modules for frequency inverters
- IO add-on module type Z-Modul-B, Article No. 380052
  If the integrated inputs and outputs are not sufficient, other inputs and outputs can be created with the Z-Modul-B. These are also programmable:
  - 1 analog input
  - 1 analog output
  - 3 digital inputs
  - 2 digital outputs (relays)
- LON® Add-on module type Z-Modul-L, Article No. 380086
  For integration into a bus system LON® by a two-wire

Icontrol without main switch, with UL authorisation
3~ 208...480V 50/60Hz

Type	Article no.	Rated voltage	Rated current	Rated power	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	kW	°F	A	W	°F		lbs	inch
FXDM32A	308078-UL	400	32	15	122	35	750	131	IP54	51.8	15.20 x 20.67 x 11.14
FXDM32AE	308079-UL		32	15	122	35	750	131	IP20	62.0	13.50 x 23.62 x 11.02

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance
rated power = power rating of the internal rotor motor. The motor rated current is decisive for the assignment of the frequency inverter.