

Fiche produit Motralec Ziehl Abegg FXDM AM - fiche technique | Motralec

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Frequency inverters [www.motralec.com](http://www.motralec.com) / [service-commercial@motralec.com](mailto:service-commercial@motralec.com) / 01.39.97.65.10 Control technology Main catalogue

# Frequency inverters

## 3~ Fcontrol, universal controller with display



The Fcontrol frequency inverters provide special advantages. Fcontrols have an all pole effective sine filter integrated which provides sinusoidal output voltage that is comparable with the standard mains. That means the frequency inverter enables reliable, demand-oriented and energy-saving control of asynchronous motors (external rotor motors, IEC standard motors) without having to take measures into consideration required by standard frequency inverters.

The advantages provided by the Fcontrol frequency inverter are:

- Operation without shielded motor feed lines
- The line length is not restricted by Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No risk to motors (they do not have to be frequency inverter compatible) since they are supplied with sinusoidal voltage that corresponds to the line voltage.

The benefits are especially advantageous in plants in which motors or fans are operated in parallel on a frequency inverter. Motors connected in parallel often means long cable lengths which is no problem with the Fcontrol. On top of that, unshielded cables can be used.

### Input for sensors or speed settings through



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



Connecting pressure sensors (refrigeration), e.g. type MBG... sensors, measuring range 0...30 bar, 0...50 bar



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



Connecting differential pressure sensors (air conditioning), e.g. type MPG... sensors, measuring range 0...6000 Pa, acquisition of volume flows up to 65000 m³/h



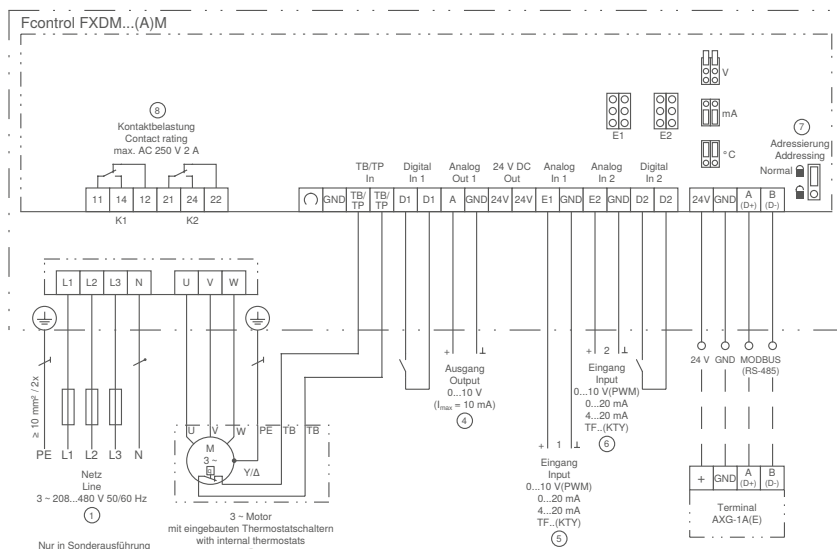
Connecting air velocity sensors, e.g. type MAL... sensors, measuring range 0...1 m/s, 0...10 m/s



Connecting additional sensors, e.g. combination sensors, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

The Fcontrol universal devices are ideal for the following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation tasks, clean room technology. Fast commissioning for typical applications in the stated sectors by selecting pre-programmed operating modes possible.

### Connection diagram



- ① Line
- ② Only in special version suitable for IT system!
- ③ Motor feeder cable
- ④ Output
- ⑤ Input
- ⑥ Addressing
- ⑦ Contact rating

## Standard conformity

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

## Equipment/Characteristics

### Integrated all pole effective sine filter

Phase to phase and phase to grounded conductor which means sinusoidal output voltage. Measures typical for frequency inverters such as shielded motor feed lines are not required.

### LC-multifunction 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 speed, limit the maximum speed, inverting and limits. Setting, e.g. for 2-stage mode

### 2 analogue inputs for sensors or setpoint 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 to Sensor 1, average calculation, setpoint input, setpoint adjustment (e.g. dependent on outdoor temperature)

### Two digital inputs. D2 and D1:

Programmable, e.g. enable, switchover Setpoint 2 or 1 switchover control or manual operation, switchover E2, or E2, reverse control function, limit output, display of external fault, reset, reverse the rotary direction

### 2, analogue output A1:

Setting through operating modes or manually programmable, e.g., output signal proportional modulation, output signal proportional input signal, invertible, 10 V constant voltage, group control

### 10 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 thermostats (TB or TP).

### Interface RS485 MODBUS RTU:

Integration into bus system

### Setting protection / memory for settings:

Enable settings protection from unauthorised access, restore implemented settings

### Event memory:

Query events that have occurred, operating times, etc.

## Optional equipment

### Add-on modules for frequency inverters

- IO add-on module type Z-module, 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

Information

Motor protection

Fcontrol, Icontrol

UNicon

Acontrol, Ucontrol, Dcontrol

Transformer

System components

Appendix

# frequency inverters

## 3~ Fcontrol, universal device with display

Fcontrol, universal controller with display, UL 3~ 208...480V 50/60Hz										
Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
FXDM2.5AM	308099	400	2.5	40	6	50	55	IP54	3.30	240 x 284 x 115
FXDM5AM	308138		5	50	10	100	55		7.20	250 x 302 x 195.5
FXDM8AM	308140		8	50	10	150	55		7.90	250 x 302 x 195.5
FXDM10AM	308142		10	55	16	210	55		8.20	250 x 302 x 195.5
FXDM14AM	308144		14	40	16	310	55		8.70	250 x 302 x 195.5
FXDM18AM	308174		18	40	20	400	55		9.10	250 x 302 x 195.5
FXDM22AM	308108		22	40	25	520	55		14.50	280 x 355 x 239
FXDM32AM	308009		32	50	35	700	55		29.60	386 x 525 x 283
FXDM40AM	308177		40	50	50	790	55		29.60	386 x 525 x 283
FXDM50AM	308183		50	50	63	910	55		32.80	386 x 525 x 283
FXDM32AME	308008		32	50	35	700	55	IP20	33.14	343 x 600 x 280

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

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FXDM32AME	308008-UL		32	50	35	700	55	IP20	33.10	343 x 600 x 280

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

## Besoin d'un prix ou d'un conseil technique ?

Ventilateur Ziehl Abegg FXDM AM



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[www.motralec.com/.../ziehl-abegg](http://www.motralec.com/.../ziehl-abegg)

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