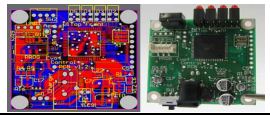


Technical Specifications (Release 2015_1)

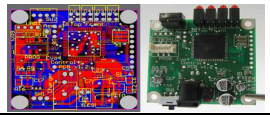
Speed control units for electronic asynchronous single-phase and two phase motors

We would like to introduce our new line of electronic speed control units for asynchronous single-phase and two phase motors, based on a new technology, which allow performances close to those ones achievable with an inverter but considerably lower in price.
Product range has been developed to drive asynchronous single-phase and two phase motors with power absorption from less than 2 Ampere to 10 Ampere continuous.
Range includes devices for up to 2 Ampere (VAR886) and up to 10 Ampere motors (VAR260).
Our speed control units have been repeatedly tested in laboratory for different applications, that have confirmed the validity of the technical solution adopted.

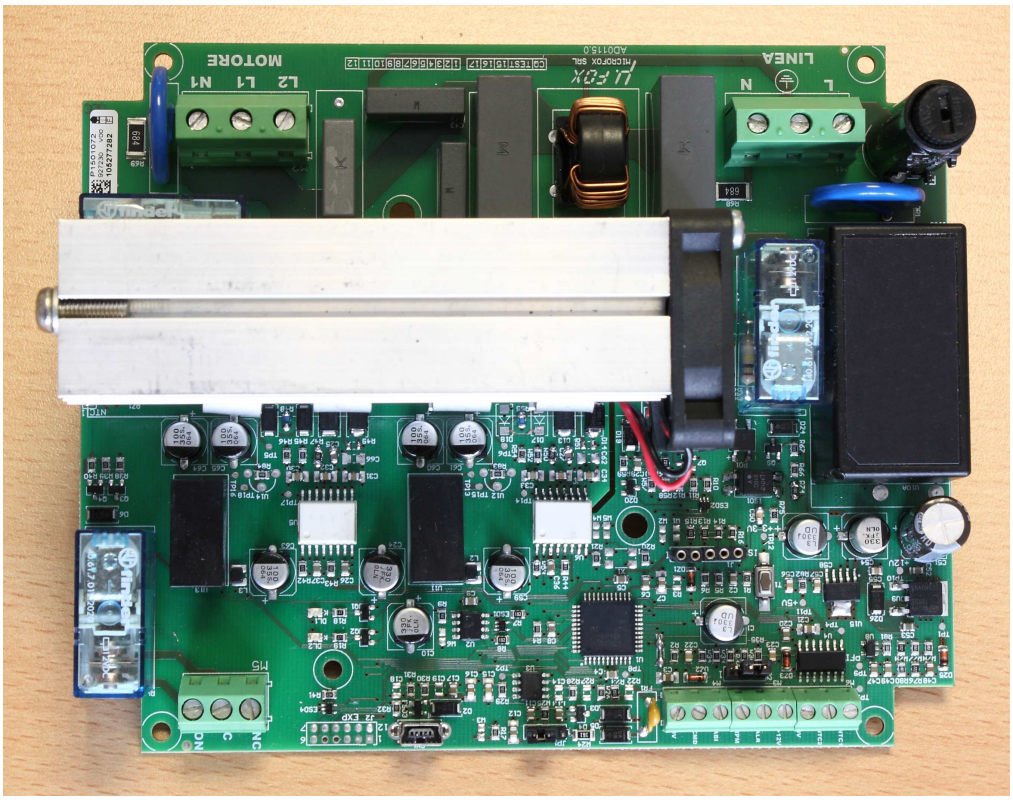
The advantages reached from this kind of technology are the following:

- Retrofitting: no need to replace the original single or two phase motor as necessary with INVERTER.
- No motor electro-mechanical noise at any running speed, considerably detected with TRIAC speed control unit.
- No motor overheating (the device neither adds nor absorbs heat).
- Wide range of motor speed regulation (with TRIAC speed control units minimum speed cannot be lower than 45%):
  - 8% - 100% on fans.
  - 20% - 100% on pumps.
- Better motor efficiency at low speed rotation.
- Low power absorption which makes costs lower than on/off control.
- Linear, direct and proportional speed regulation.
- Lower costs than using F/V or FOC regulation (INVERTER).

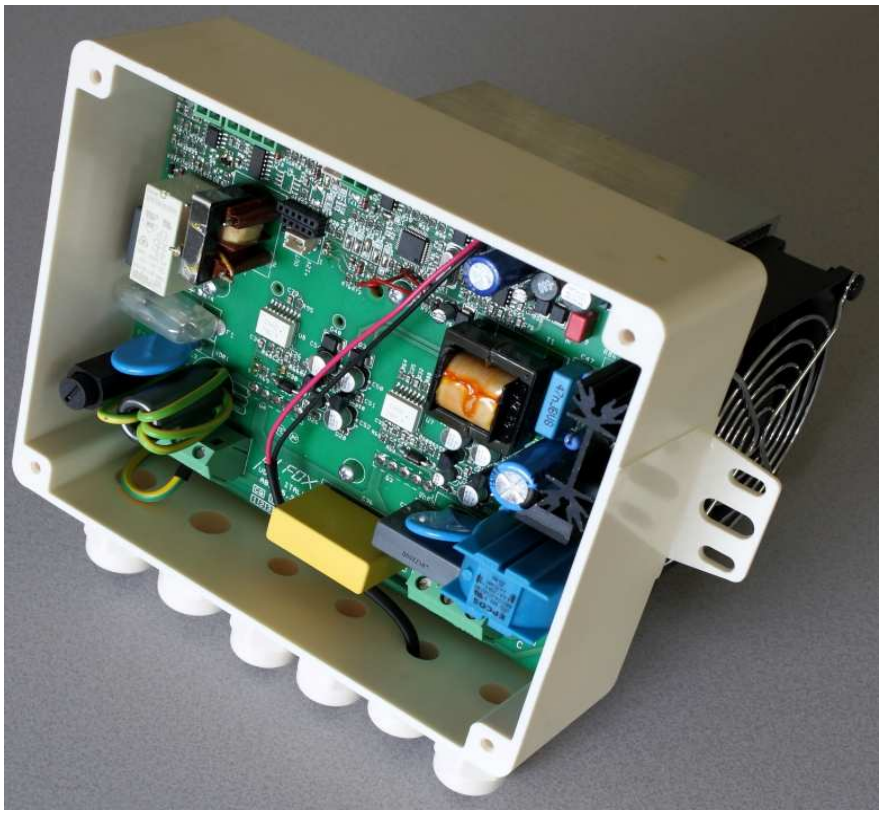
The first model was designed for single phase asynchronous motors, requiring maximum power absorption of 10 Ampere continuous.
Following this project, it has been developed a similar device for applications on smaller single phase and two phase motors up to 450W with power absorption of about 2 Ampere continuous. Speed control units can be assembled into systems, creating small automations to be used for fans and/or convectors installed on fireplaces, kitchen hoods etc. Regulation can be either simple or depending on different parameters, such as signals coming from temperature, pressure or humidity sensors.

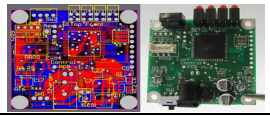


VA886 2 Ampere motor speed control



VAR260 10 Ampere motor speed control



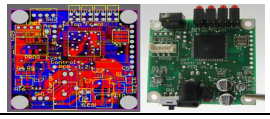


Main device features:

Power supply:	230Vac 50/60 Hz single phase.
Load:	Asynchronous single-phase or two phase motors, resistive loads
Current absorption:	Maximum 2 Ampere continuous (VAR886) Maximum 10 Ampere continuous (VAR260)
Input analogical signal:	Standard 0–10Vdc/4-20mA. On request: potentiometer, two NTC temperature sensor.
Input digital signal:	RPM sensor, run enable
Output digital signal:	NPN transitor alarm, OPEN COLLECTOR output.
Output relay:	NO-C-NC dry contact (alarm or other function), dry contact reverse rotation.
Data input/output signal:	On request: FoxBus protocol, RS485, ModBus or other in according with customer technical specifications; Mini USB configuration.
Standard board:	Board at sight with IP00 protection, integrated heat sink and line filter for VAR886. It is possible to supply board in ABS IP56 box.
Standard board dimensions:	2 Ampere about 158x128x55H mm. 10 Ampere about 170x140x120H mm.
Standard weight:	2 Ampere less than 0,5 Kg. 10 Ampere less than 2 Kg.

All models can be provided with linear and/or proportional sensors such as temperature sensor, double temperature sensor for different measurements, relative and/or absolute humidity sensor, air opacity and/or particles and/or quality sensor, pressure sensor and/or whatever else is needed in producing small automatic control units.

Controlling motors in a proportional way (no on/off), the device has a better efficiency, noiseless performances, low power consumption and lower running expenses.



Devices can be easily connected to any equipment which controls:

- Fans
- Cooling condensers
- Extractor fans and hoods
- Air conditioning
- Hydraulic pumps
- Submersible pumps
- Whirlpool pumps
- Electric resistances

Note
All information in this document is for reference only.
Microfox Srl reserves the right to make changes without prior notice.