CONTROL PANELS and INVERTER for three-phase motors

FASAR elettronica

Air intake and ventilation

Our speed controllers for tree-phase motors

FASAR Elettronica designs and produces a vast range of electrical panels for the intelligent control of air extraction and exchange systems for professional and industrial environments.

Added to the large range of controllers for small-power single-phase motors, there are the new electrical and electronic control systems for three-phase power systems: a vast catalog of products in continuous evolution and always oriented towards satisfying the requests of the most demanding customers.

The internal design and production, the capacity and flexibility in the development of new products (standard or customized) together with an efficient and punctual consultancy and technical assistance service, place us among the most flexible and loyal companies in the sector towards our customers, in Italy and abroad.

Our catalog of ***three-phase controllers*** for air intake and environmental ventilation systems includes the following products:

- ***Three-phase inverters*** from 0.75 kW up to and over 7.5 kW made in IP20 or IP66 protection enclosures.

The inverters are available as individual components, or previously programmed (according to agreed specifications) installed in control panels with a potentiometer to regulate motor speed.

This highly requested possibility simplifies the installation and use of the product.

- **Line of AIR SMART CONTROLLER control panels with inverter for compensation systems specifically designed for ventilation of professional kitchens.**

The control panels, the new important company's products which can be made upon customer request for a wide range of powers, are equipped with a dedicated microprocessor electronic control system, backlit digital display with potentiometer and keyboard for simple and intuitive view of the operating parameters (suction power, percentage of air re-integration compared to the aspirated one, timings).

Optionally, a serial connection is available for remote control and monitoring of the system and an external module that measures air quality (including temperature, humidity and CO2 sensors), optimizing the operation of the system according to the degree of environmental pollution.

These innovative features make the system "intelligent" by adapting it to the actual air exchange needs of the room, guaranteeing ease of use, a comfortable working environment and considerable electricity savings.

- **Industrial control panels for air intake and ventilation realized according to customer specifications.**

Using our basic components (inverters, controllers and command systems, interfaces for remote communication and air quality sensor modules for environmental monitoring) we realize control systems for three-phase motors of various power and composition, starting from the simplest devices up to controllers for complex and interconnected systems, characterized by manual, automatic or mixed operation.

Our technical office is available to customers for any evaluation and personalized creation.

The ***AIR SMART CONTROLLER*** line of panels for controlling the extraction systems of professional and industrial kitchens is particularly interesting and innovative, in fact it integrates an efficient electronic control system that allows you to program, in a simple and intuitive way, the percentage of air - released into the environment compared to that aspirated.

The speed of the suction motor is regulated manually with a simple potentiometer and the percentage of air reintroduced into the room is automatically subservient to that sucked in according to the set ratio.

In this way the correct exchange of air in the work environment is guaranteed, maintaining a slight negative pressure which prevents the spread of odors in the nearby rooms occupied by diners.

Since the *AIR SMART CONTROLLER* system is managed by an "intelligent" electronic board equipped with a microprocessor and digital display, it is easy to program the control to satisfy any installation requirement that optimizes the system's performance based on technical and economic constraints.

With a compensation system, it is possible to size the ratio between the flow rate of air sucked in and that re-integrated into the environment in various ways, for example:

1. Use suction and air reintegration motors with different powers, such that the respective flow rates (taking into account system losses) are in the desired ratio. Each motor is powered by its own inverter and the two inverters, previously programmed, are controlled by a single potentiometer which regulates the speed, and therefore the flow rate of the system. This is a simple but rigid option which does not allow, during installation, to adjust the air intake/re-integrated air ratio to compensate for unforeseen flow losses in the system (in the project or during use) which lead to variations or unacceptable degradations in performance compared to design data.

2. Using the ***AIR SMART CONTROLLER*** system it is possible to use identical inverters that control identical motors for air intake and re-integration or, more economically, size the choice of inverters and motors approximately according to the desired ratio. In all cases, it will always be possible, as well as simple, to program the extract air/inlet air ratio after installation in order to optimize the operation of the system to compensate for any pressure losses and/or unforeseen events linked to the design evaluations. A further and not negligible advantage of this control is the possibility of inserting a deferred automatic shutdown of the system with programmable times.

Our modules used in control panels are customizable and programmable with functions and parameters dedicated to specific sectors and applications, according to the requests of our customers: an interview with our technical office will clarify any doubts.

The possibility of networking our control panels using serial interfaces extends the functionality of the system allowing remote management and monitoring of the devices, facilitating the "digitalisation" of the company with all the advantages that derive from it, especially in industrial sector.

Of notable importance is the increase in efficiency and the consequent energy saving due to the automation in the operation of large extraction/ventilation systems: by combining the air quality sensor module with our *AIR SMART CONTROLLER* panel it is possible to optimize the operation of the a system that will work best when needed and only when needed.

Air intake and ventilation

Our speed regulators for tree-phase motors

IP20

Compact, robust and reliable general purpose drive for panel mounting

Cod. FE1067: Inverter 380-480V, 0.75kW, 2.2A - ODE-3-140022-3F12

Cod. FE1059: Inverter 380-480V, 1.5kW, 4.1A - ODE-3-140041-3F12

Cod. FE1060: Inverter 380-480V, 2.2kW, 5.8A - ODE-3-240058-3F42

Cod. FE1061: Inverter 380-480V, 4.0kW, 9.5A - ODE-3-240095-3F42

Cod. FE1062: Inverter 380-480V, 5.5kW, 14.0A - ODE-3-340140-3F42

Cod. FE1068: Inverter 380-480V, 7.5kW, 18.0A - ODE-3-340180-3F42

Cod. FE1071: Remote Keypad Module – OPT-2-OPORT-IN

IP66 Outdoor

Outdoor rated enclosed drives for direct machine mounting, dust tight and ready for washdown duty

Cod. FE1069: Inverter 380-480V, 0.75kW, 2.2A- ODE-3-140022-3F1B

Cod. FE1063: Inverter 380-480V, 1.5kW, 4.1A- ODE-3-140041-3F1B

Cod. FE1064: Inverter 380-480V, 2.2kW, 5.8A - ODE-3-240058-3F4B

Cod. FE1065: Inverter 380-480V, 4.0kW, 9.5A - ODE-3-240095-3F4B

Cod. FE1066: Inverter 380-480V, 5.5kW, 14.0A - ODE-3-340140-3F4B

Cod. FE1070: Inverter 380-480V, 7.5kW, 18.0A - ODE-3-340180-3F4B

IP20

IP66 Outdoor

FASAR elettronica

- **Inverter for tree-phase motors**

IP20

	FE1067	FE1059	FE1060	FE1061	FE1062	FE1068
						
Voltage and Frequency Supply	380 - 480V - 48-62Hz					
Output Power	400V 3 Ph Input: 0,75-22kW 460V 3 Ph Input: 1-30HP					
Motor Output	0.75kW	1.5kW	2.2kW	4.0kW	5.5kW	7.5kW
Output Current	2.2A	4.1A	5.8A	9.5A	14.0A	18.0A
Application Macros	Switch beetween Industrial, Pump and Fan modes to optimize inverter for your application					
Programming	Built-in keypad as standard 7 Segment LED					
Control Specification	Sensorless Vector Speed Control					
EMC filter	Internal EMC filter					
CANopen	125-1000kbps					
Modbus RTU	9,6-115,2 kbps selectable					
IP protection	IP20					
Weight (kg)	1,0	1,0	1,7	1,7	3,2	3,2
Size (mm)	123x83x173h	123x83x173h	150x110x221h	150x110x221h	175x131x261h	175x131x261h
Fixings	4 x M5	4 x M5	4 x M5	4 x M5	4 x M5	4 x M5

Cod. FE1071: Remote Keypad Module OPT-2-OPORT-IN

IP66

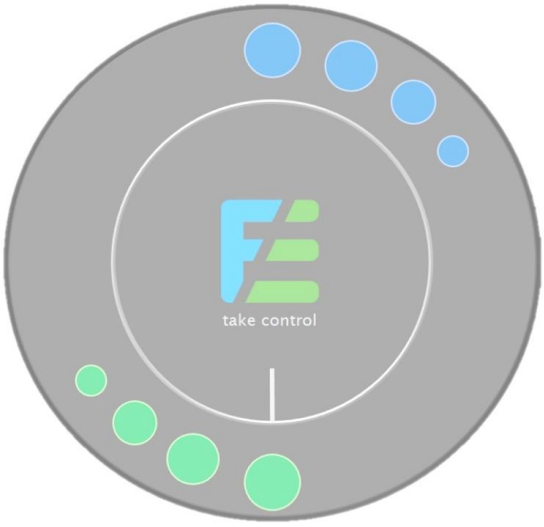
	FE1069	FE1063	FE1064	FE1065	FE1066	FE1070
						
Voltage and Frequency Supply	380 - 480V - 48-62Hz					
Output Power	400V 3 Ph Input: 0,75-22kW 460V 3 Ph Input: 1-30HP					
Motor Output	0.75kW	1.5kW	2.2kW	4.0kW	5.5kW	7.5kW
Output Current	2.2A	4.1A	5.8A	9.5A	14.0A	18.0A
Application Macros	Switch beetween Industrial, Pump and Fan modes to optimize inverter for your application					
Programming	Built-in keypad as standard 7 Segment LED					
User Interface	Local Speed Potentiometer Run Reverse / Off / Run Forward Switch Lockable Mains Disconnect / Isolator					
Control Specification	Sensorless Vector Speed Control					
EMC filter	Internal EMC filter					
CANopen	125-1000kbps					
Modbus RTU	9,6-115,2 kbps selectable					
IP protection	IP66					
Weight (kg)	2,3	2,3	3,5	3,5	6,6	6.6
Size (mm)	162x161x232h	162x161x232h	182x188x257h	182x188x257h	235x211x310h	235x211x310h
Fixings	4 x M4	4 x M4	4 x M4	4 x M4	4 x M4	4 x M4

AIR SMART CONTROLLER

Intelligent control panels for air intake and exchange systems

Air Smart Controller consists of:

- Thermosetting resin container, grey RAL7035.
- Main disconnector, 400Vac power supply.
- Key lock with handle.
- An inverter suitable for the power of extraction motor.
- An inverter suitable for the power of air intake motor.
- A user interface board with LCD display, 3 buttons and knob, intuitive and simple to use. It allows you to program a timer for the delayed shutdown of the motors and the air intake/extraction ratio between the 2 motors. On the board there is a relay dedicated to the management of a gas solenoid valve.



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