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# VRMS

## FANS SPEED CONTROLLER FOR AC MONOPHASE FANS

v.0518

The VRMS electronic controller is used to adjust proportionally and continuously the speed of voltage adjustable fans, through a particular software which guarantees the best performance in regulation. They function as a simple voltage regulator whose command signal comes from a remote control or from a potentiometer.

FAE produces a version for pwm signal command and a version for 0..10V= command signal. The VRMS regulators are robust because they are enclosed in an aluminum case. They are easy to use because they can be hooked on a rail (Omega RAIL DIN/EN 50022) and fast to wire because they have spring-loaded terminals and output power terminals for direct connection to several loads. They are an excellent solution for reduced sizes and low-cost applications.

The standard version presents the following features:

- Mono-phase power supply 230Vac 50-60Hz,
- Command input 0..10V, potentiometer 10kohm (input impedance 10kohm) or pwm (input impedance 150ohm),
- Dip switches with 7 positions to select one of the following voltages/speeds on the load: 170V-180V-190V-200V-210V-220V-230V,
- Dip switch for activation of the speed up function at the start,
- Auxiliary output (terminal +10V) to supply a potentiometer,
- Protections: Class II for input commands (4kV), class I for the accessible parts; Overvoltage protection Class II.
- Working temperature: -25T50°C, storage temperature -40T80°C,
- Protection grade : metallic IP20 case, pollution grade 3
- Standard norms applied: EN60730-1, EN61800-6-3



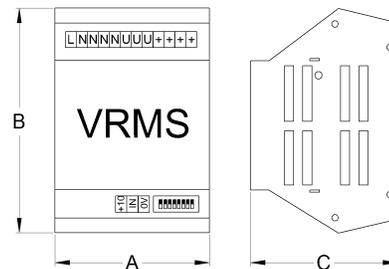
Coding for the choice of the product :

Position 1 2 3 4 5 6 7  
**VRMS 8 A V MT 20 XX**

- Pos. 1 : Model regulator VRMS = regulator monophase slave
- Pos. 2 : Nominal current 8 = 8A / 12 = 12A
- Pos. 3 : Power supply A=230V~50Hz
- Pos. 4 : Command signal D = pwm, V = 0..10V
- Pos. 5 : Case MT = metallic
- Pos. 6 : Protection grade 20 = IP20
- Pos. 7 : Specific variant

Weight and dimensions:

	Power (kVA)	Current (A)	Weight (kg)	Dimensions (mm)		
				A	B	C
<b>VRMS 8</b>	1,8	8	0,4	90	120	85
<b>VRMS 12</b>	3	12	0,6	138	120	85



**Electrical installation:**

All wiring should conform to local regulations and must be made by authorized personnel only.

To protect the regulator, the installation technician must install extra-rapid semiconductor fuses upstream of the power supply adequate for the load and with a value of  $I^2xt$  less than the value given in the table below.

\*Max current refers to an environment temperature of 50°C for a maximum time of 10 second every 5 minutes.

	Current max* (A) RMS	Power dissipation (W)	Power Cables (mm <sup>2</sup> )	Fuses aR (A)	I <sup>2</sup> xt (A <sup>2</sup> S)
<b>VRMS 8</b>	11	18	1,5	16	340
<b>VRMS12</b>	16	30	2,5	20	450

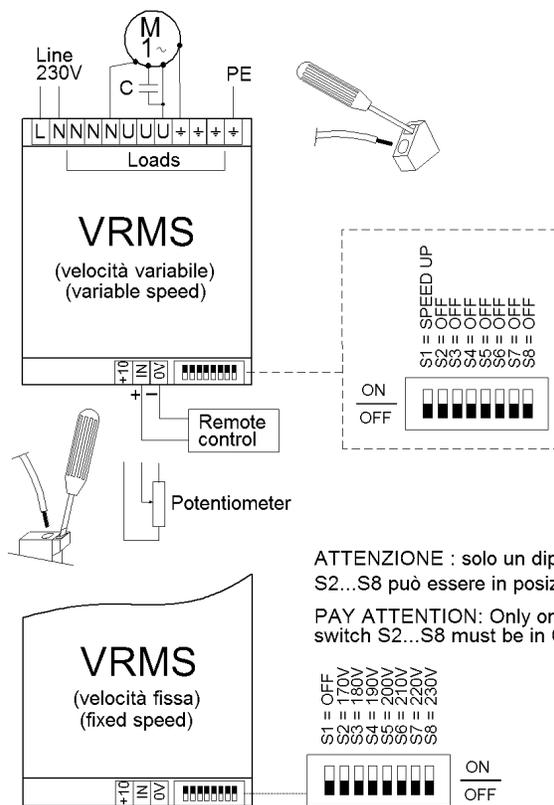
The recommended stripping length for the control wires is 9mm while for the power wires it is 7mm. To connect wiring to the spring terminals, apply leverage with a screwdriver on the lever or on the highest rectangular hole to open the terminal (see below the panoramic view cards). Connect the power wires and ground to the appropriate regulator terminals. To avoid dispersion currents, the motor earth cable must be connected to the appropriate motor terminal ground. We recommend not introduce any electromechanical device on the motor cable. We recommend to connect to the machine's safety circuit any thermal motor protector in order to remove the control power supply and protect the motor with maximum efficiency. If the length of the motor cable exceeds 10 metres, we suggest to use shielded cable. The control load can consist of several engines provided the sum of the rated currents of the motors is less than 20% of the rated current of the control. We recommend not introduce any electromechanical device on the motor cable. If the control cable length exceeds 3 metres, we suggest to use shielded cable, connecting the shield only on the regulator. We suggest don't connect the control 0volt to the earth. If the length of the power, motor and control cables exceeds 10m, make sure they are separated by at least 0.3 metres to avoid creating a coupling effect. If controls are set up in environment subject to electromagnetic disturbance, they should be housed inside a suitable metallic enclosure. In order to prevent the formation of condensation and regular working also cold temperature it is recommended you insure a constant power supply, avoiding turning it off continually.

ATTENTION: VRMS is a product for professional use intended for the control of equipment under normal operating conditions and has a Class A software structure. VRMS is designed to control equipment under normal operating conditions. Where failure or malfunction of the VRMS could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limiters or safety controls) or systems (alarm or supervision systems) intended to warn of or protect against failure or malfunction of the VRMS must be incorporated and maintained as part of the control system.

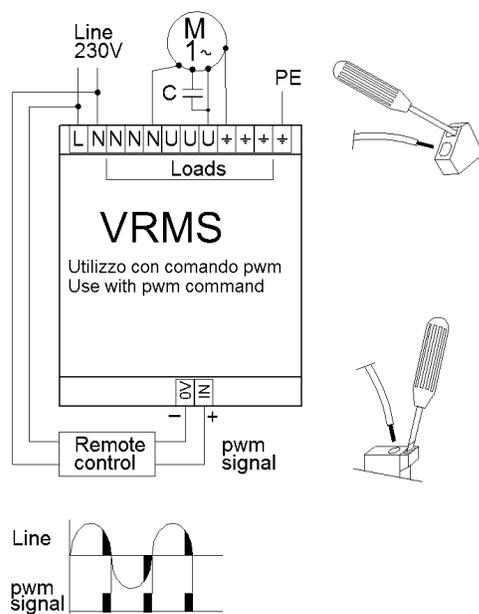
**Disposal:**

The sign marked on the equipment indicates that it is not to be considered as a normal domestic waste, therefore it has to be disposed of in a specific electrical and electronic equipment recycling point.

**VRMS8AVMT20 - VRMS12AVMT20**



**VRMS8ADMT20 - VRMS12ADMT20**



L'alimentazione del VRMS e il controllo remoto devono essere in fase (stessa alimentazione)

Supply for VRMS and remote control must be on phase (same power line supply)