

VRT 6-A1 SINGLE-PHASE VOLTAGE REGULATOR WITH ANALOG SET POINT

- Output voltage adjusted by 0-10 V or 4-20 mA set point
- External On/Off switch by contact or 3-wire PNP sensor
- Auxiliary power output 24 Vdc/120 mA
- Model 6 A/1.2 kW
- Overvoltage and overload protection
- EMC filtering
- IP 54 Protection



GENERAL DESCRIPTION

VRT 6-A1 operates on the principle of conduction angle. A microprocessor based control system provides optimal control of the power semiconductor, increasing the range and stability of the output voltage.

A 0-10 V or 4-20 mA analog signal controls the output voltage level, allowing the VRT 6-A1 to be configured for a wide range of applications.

VRT 6-A1 applications include :

Temperature control.
Fan speed control.
Range control for vibrating appliances.
Speed variation on universal, asynchronous and phase angle motors.
Light intensity control.
Current or voltage control on battery charger.

Voltage regulators are suitable replacements for autotransformers and step-down converters in applications that support the phase cutting principle.

SPECIFICATIONS

POWER SUPPLY

Voltage	230 Vac \pm 15 %
Frequency	50 Hz \pm 2 Hz
Power consumption (without load)	70 mA
Protection	Overvoltage / overload

INPUT 0-10 Vdc

Input voltage	From 0 to 10 Vdc
Transfer characteristics	Linearized

AUXILIARY POWER OUTPUT 24 Vdc

Output voltage	24 Vdc regulated
Maximum output current	120 mA
Protection	Short circuit and reversal

MECHANICAL ENVIRONMENT

Protection	IP 54 (EN 60-529)
Dimensions	145 x 128 x 62 mm
Material	ABS UL94-V0
Color	RAL 9010
Power connection	Cable 3 x 2.5 mm ² max
Control connection	Cable 3 x 1.5 mm ² max
Fixing	4 screws, max diameter 4 mm
Compliance with EMC directive	89/336/CEE
Compliance with LV directive	73/23/CEE

LOAD OUTPUT

Voltage	From 0 to 98% of power supply
Frequency	50 Hz \pm 2 Hz
Current	6 A max

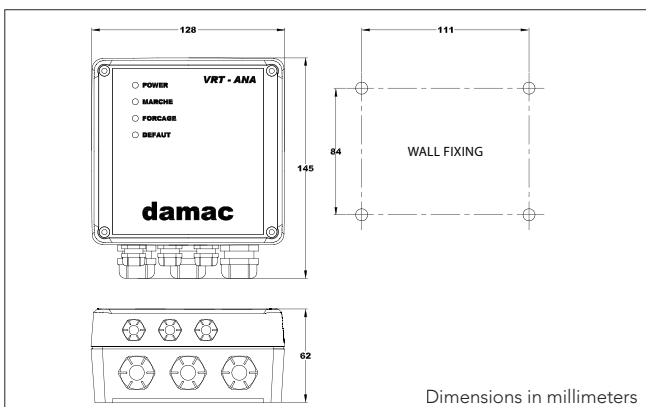
INPUT 4-20 mA

Input current	From 0 to 20 mA
Transfer characteristics	Linearized

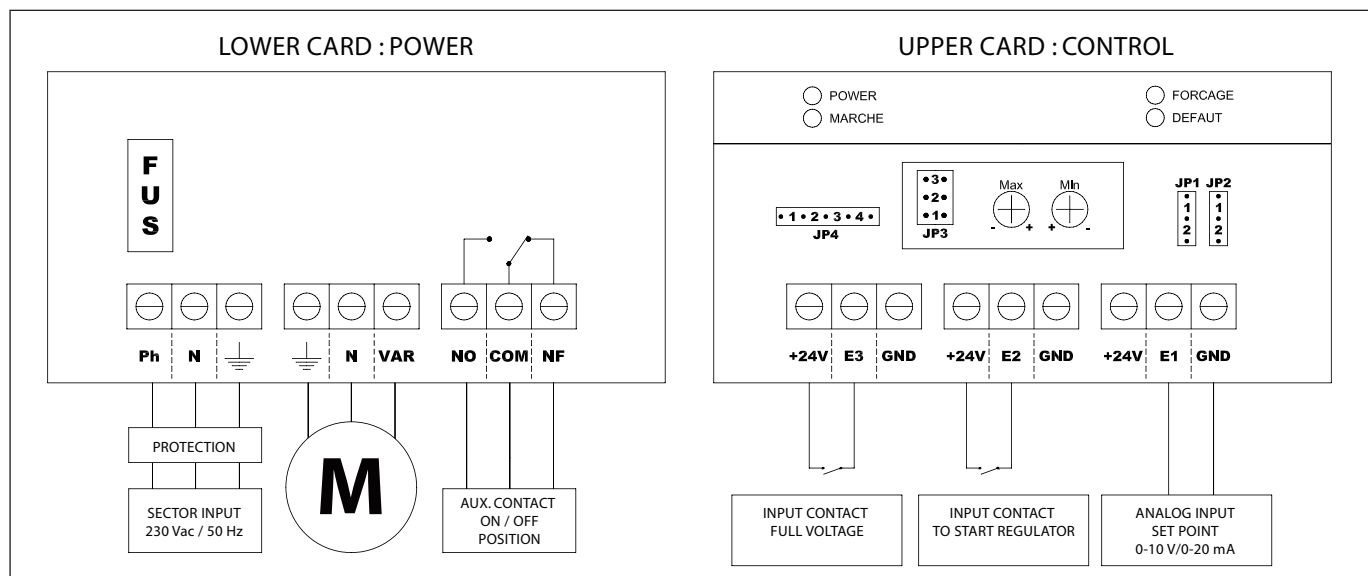
OPERATING AND STORAGE TEMPERATURES

Storage temperature range	-10 °C to +60 °C
Operating temperature range	-10 °C to +45 °C

SIZE



SCHEMATIC PRINCIPLE



WORKING PRINCIPLES

External input		LED		Function
E3	E2	Marche	Forçage	
		Off	Off	Voltage regulator off (1)
		On	Off	Voltage regulator on (2)
	X	On	On	Forced full voltage output (3)

X = don't care.

(1) Regulator is stopped by the external on/off input. (2) Regulator is started by the external on/off input. Voltage changes according to the set point between set minimum and maximum values. (3) Regulator delivers maximum preset voltage.