

TECSYSTEM S.r.l®

INSTRUCTION MANUAL

VRT600



RoHS
COMPLIANT
2002/95/EG

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VRT600

1) TECHNICAL SPECIFICATIONS

<p>SUPPLY VRT600</p> <ul style="list-style-type: none"> Rated values 230 Vac $\pm 10\%$ (7,5 VA) 50-60 Hz 	<p>DIMENSIONS</p> <ul style="list-style-type: none"> 100x100 mm DIN43700 depth 140 mm (terminal box included) Panel cut-out 92x92 mm
<p>INPUTS</p> <ul style="list-style-type: none"> 2 lines input FAN 230 Vca$\pm 10\%$, 15 A max., 50-60 Hz 1 contact to enable the remote control (ENABLE) Removable rear terminals (except FAN lines) 	<p>OUTPUTS</p> <ul style="list-style-type: none"> 1 alarm and fault relay (ALARM/ FAULT) Output relay capacity 5A-250 Vac resistive Outputs M1-M2-M3-M4-M5-M6: 230 Vca$\pm 10\%$, 5 A max., 50-60 Hz
<p>TESTS AND PERFORMANCES</p> <ul style="list-style-type: none"> Assembling in accordance with CE EN61000-4-4, EN61000-4-5, EN61000-4-11 rules dielectric strength 2500 Vac for 1 minute: supply-relay fault, supply-remote Ambient operating temperature from -20°C to $+60^{\circ}\text{C}$ Humidity 90% non-condensing NORYL 94V0 housing Option Protection treatment of electronic part Frontal in polycarbonate IP54 (*) Vibration test IEC 68-2-6 Amplitude ± 1 mm from 2Hz to 13.2Hz Acceleration $\pm 0.7\text{G}$ from 13.2Hz to 100Hz. (*) Seismic test according to IEEE 344-1.987 <p>*Cross reference T154 for constructive analogy.</p>	<p>DISPLAYING AND DATA MANAGEMENT</p> <ul style="list-style-type: none"> Alarm leds: undercurrent, overcurrent, overtemp Running remote, local leds Prg, prg setting, cal. leds Starting AUTO-TUNING to set out the motor working Front key for local START/STOP of the motors Front alarm RESET key <p>Programming access through front key</p>

2) SUPPLY

The VRT600 monitoring unit is designed to be fed at 230VAC $\pm 10\%$.
A variation in the line voltage higher than 10% could cause alarms owing to the variation of the current in the load.

If the presence of harmonic frequencies affects the electric network, there could be alarm warnings because of the consequent change of motors absorbed current.

According to the regulations for the plant typology, it is recommended to check the harmonic level in order to avoid malfunctions or damages to all electric and electronic instruments connected to the system.

3) WORKING

After switching on, the meter carries out a LAMP TEST and sets itself in **REMOTE** or **LOCAL** mode, according to the condition present before switching off.

In **REMOTE** mode, the fans are activated by the closing of 60-61 contact which shall be connected to **FAN** contact of the temperature control monitoring unit.

In **LOCAL** mode, the fans are activated by pushing **<START-STOP>** key. The working state is stored if supply is lacking.

4) HOW TO CHECK STATE OF THE ALARMS

- **Running led off:** any fan activating command
- **Running led on:** REMOTE or LOCAL fan activating
- **Over and under current leds off:** correct and regular working of the motor
- **Over current led on:** motor stopped by overcurrent
- **Under current led on:** working motor + alarm undercurrent signal
- **Under current led blinking:** motor disconnected during autotuning
- **Over current led blinking:** motor absorption $>5,5A$ (immediate release without delay trip)
- **All leds are blinking:** corrupted memory error (**Ech**); press reset and repeat programming procedure

N.B.: Motor alerts or non-fed meter cause the closing of contacts 8-9 of ALARM/FAULT relay.

5) HOW TO RESET A MOTOR IN ALERT

To reset an alert for under current, over current, press **RESET** key after the due checks and possible repairs.

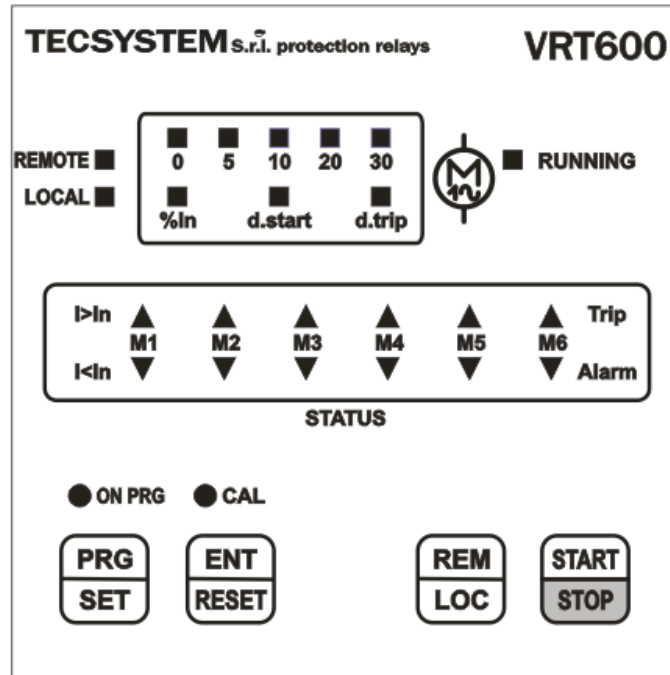
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6) PROGRAMMING

STEP	Key	Effect	NOTES
1	PRG SET	Start Programming	Keep it pressed for 5 seconds until the led ON PRG is on
2	ENT RESET	Programming "%In"	Load the highest admitted current variation as percentage value (5-10-20-30%), compared to the rated value In .
3	PRG SET	Passage to " d.start " programming step	Delay start: fan start time, during which no alarm is generated
4	ENT RESET	Time selection in seconds " d.start "	Select the desired time (5-10-20-30 seconds)
5	PRG SET	Passage to " d.trip " programming step	Delay trip: residence time of alert necessary for reporting
6	ENT RESET	Time selection in seconds " d.trip "	Select the desired time (5-10-20-30 seconds)
7	PRG SET	Motor starting for automatic calibration " CAL "	To carry out the "automatic calibration" all the motors must be connected as per final configuration. At START the motors are started up for 60 seconds, CAL led blinks and leds 0-5-10-20-30 switch ON in sequence. When the calibration is over the monitoring unit resets itself and sets up in REMOTE mode

N.B.: If the programming procedure is not correctly carried out, the fans cannot properly working.

7) FRONT PANEL



5-10-20-30:
d.start:
d.trip:
REMOTE:
LOCAL:
RUNNING:
▲ M1-M2-M3-M4-M5-M6:
▼ M1-M2-M3-M4-M5-M6:
ON PRG:
CAL:

LEDS

programming settings %In, d.start, d.trip
monitoring delay at start
releasing delay
fan external control 60-61
fan local control <start-stop>
ventilation control received
motor in over-current (trip)
motor in under-current (alarm)
programming phase
motor autotuning phase (autotuning)

KEYS

PRG-SET: entry in programming and passage to the next step
ENT-RESET: alarm reset
REM-LOC: and data selection to be programmed remote-local fan control mode.
START-STOP: fan local turning ON and turning OFF

8) RULES FOR WARRANTY

The Product purchased is covered by manufacturer's warranty or the seller's terms and conditions set forth in the "General Conditions of Sale Tecsystem srl", available at www.tecsystem.it and / or purchase agreement.

The warranty is considered valid only when the product will be damaged by causes attributable to TECSYSTEM srl, such as manufacturing or components defects.

The warranty is invalid if the Product proves tampered / modified, incorrectly connected, because voltages outside the limits, non-compliance with the technical data for use and assembly, as described in this instruction manual.

Any action about warranty is always at our factory in Corsico-MI, Italy as stated by the

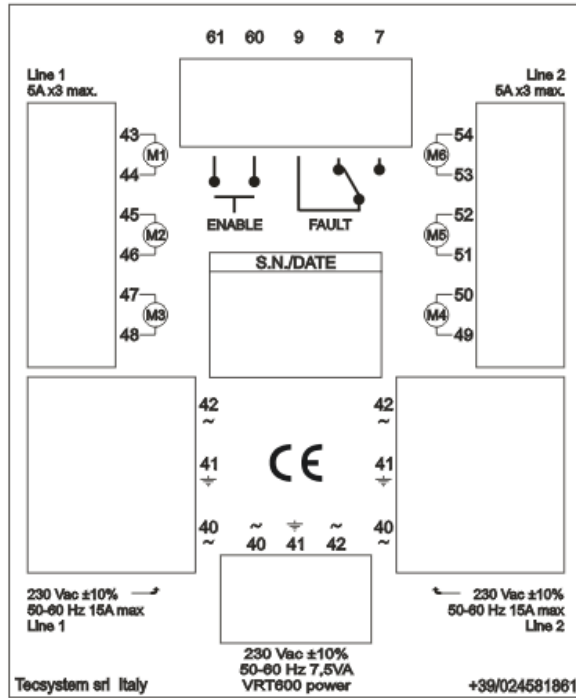
" General Conditions of Sale Tecsystem srl ".

REMARK: In case of unit replacement, to grant the correct and safe operating, you must replace all the connecting terminals with the new terminals provided with the unit: this only if the terminal blocks are of different brand.



RAEE: This SYMBOL, shown on the unit, indicates that the waste must be subject to "separate collection". The end-user must send the unit to the "waste collection centers", or return the unit to the dealer against the purchase of a new equivalent device.

9) REAR PANEL



INPUTS

Fan Line 1 (42-41-40): FAN supply M1-M2-M3 230VAC±10%
50-60Hz 15 A max.

Fan Line 2 (42-41-40): FAN supply M4-M5-M6 230VAC±10%
50-60Hz 15 A max.

40-41-42: VRT600 supply 230VAC±10% 50-60Hz, 7,5VA
60-61: remote control (to fan contact of the thermal check monitoring unit)

OUTPUTS

M1 43-44: motor 1 output
M2 45-46: motor 2 output
M3 47-48: motor 3 output
M4 49-50: motor 4 output
M5 51-52: motor 5 output
M6 53-54: motor 6 output

RELAY

FAULT 7-8-9: trouble report, contact 8-9 open during the regular working.

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NOTES: