

### FEATURES

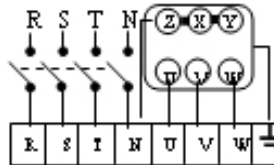
This regulator has been made specially for normal asynchronous three-phase squirrel cage motors with star connection, connected to fans or aspirators, whose absorption is lower than 6-10-16A, depending on the model, and for nominal star phase-neutral voltage up to 220V (380V on line  $\pm 10\%$ ). It allows speed regulation from about 30 up to 100% of nominal speed by choking the supply voltage with triac circuits. The use of this system may cause small motor overtemperature on low R.P.M. This anomaly, however, is acceptable if we consider the regulator to be particularly reliable, small and cheap. The regulator can be used with any ohmic load and within its electric features. For this use it is possible to supply regulators without minimum adjustment, therefore adjustment field varies from 0 up to 100% of grid voltage. It is housed in a IP55 plastic container: controls and adjustments are situated on the front panel. **THE MAXIMUM POWER SINGLE MOTORS NOT EXCEED Can 2 KW**

### APPLICATION FIELDS

*Aviculture, zootechny and greenhouse equipment - Suction systems - Thermothechnics - Air conditioning - Industrial refrigerators - Community kitchens - Ovens for paint drying - Kitchen and lab-hoods - Hot air generators.*

SUPPLY LINE  
**230-400 V+ NEUTRAL**

REGULATOR TERMINAL



**NEUTRAL CONNECTED TO MOTOR STAR CENTER**  
**IF DAMAGE IS MISSING THE GOVERNOR AND THE ENGINE**

Fig. A

**WARNING:** Downstream from UVW terminals regulator is not possible to install capacitors for any power and function.

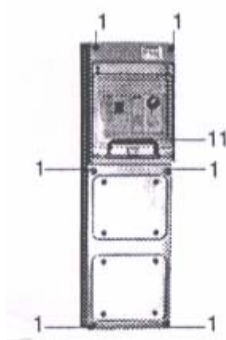


Fig. 1

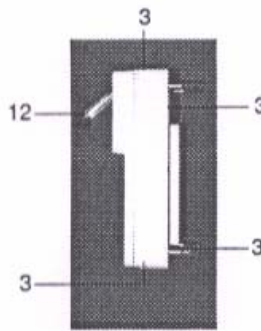


Fig. 2



Fig. 3

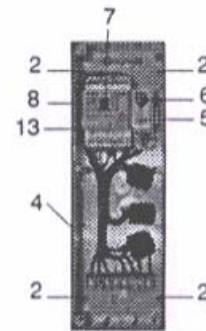


Fig. 4

### DETAILS:

- |                                                                    |                                   |                          |
|--------------------------------------------------------------------|-----------------------------------|--------------------------|
| 1) Cap fastening screws                                            | 5) Min speed adjustment trimmer   | 9) Connecting diagram    |
| 2) Regulator fixing holes                                          | 6) Speed adjustment potentiometer | 10) Inside of the cap    |
| 3) Possible electric wires inlets                                  | 7) Feeding switch                 | 11) Door opening part    |
| 4) Connecting terminal                                             | 8) Motor current setting          | 12) Controls access door |
| 13) Option - N.C. N.O. alarm contacts for switching on/off signal. |                                   |                          |

### REGULATOR MECHANICAL INSTALLATION

- A)** remove cap by loosening screws situate in part 1);  
**B)** clear the 4 holes of part 2) by slipping the screw from outside and pounding it lightly.  
**NOTE:** loosen only the number of holes you need to use.  
**C)** place the regulator on the wall by making four  $\varnothing 6\text{mm}$  holes and slipping four spacers, screws, washers and spacing pipe.  
**NOTE:** the spacing pipe allows free air circulation to the dissipator.  
**D)** joint external electrical wire carrier pipe correctly, in one of the possible inlets 3) by using special guiding cables.

### ELECTRICAL CONNECTION AND START-UP

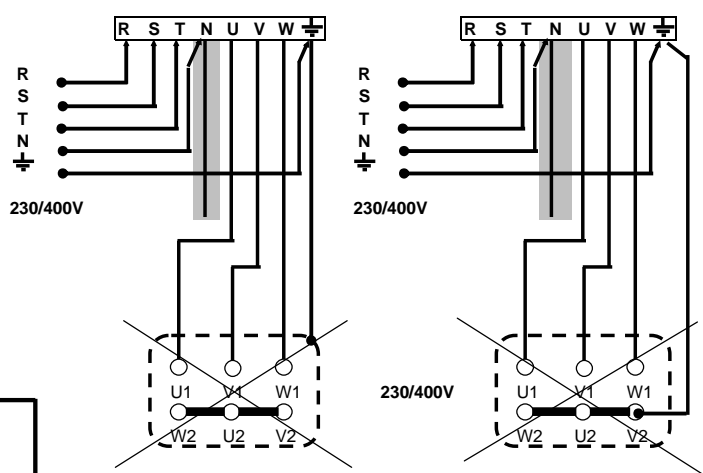
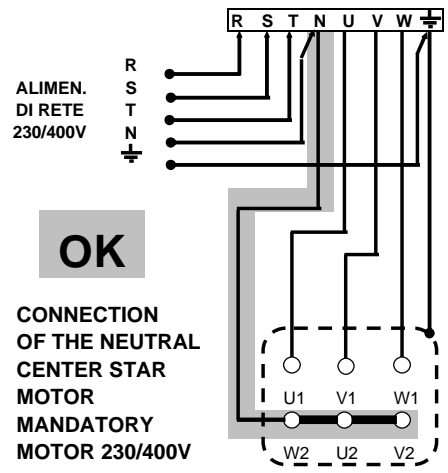
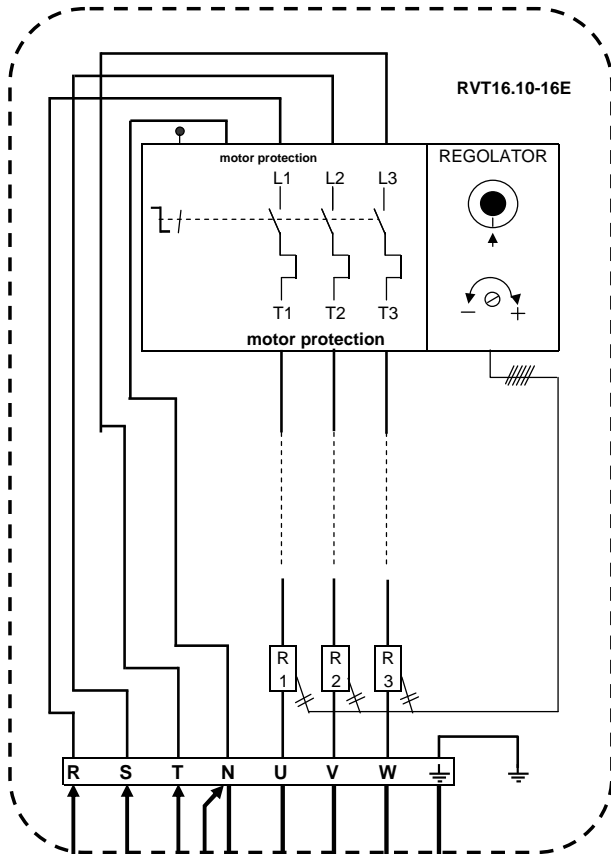
- E)** connect RST + N phases and earth connection;  
**F)** connect the motor to UVW terminals and motor star center to N terminal (motor must be star connected). See electrical diagram fig. A;  
**G)** tighten the cap fig. 1 by slipping the screws 1);  
**H)** open door 12) by lightly pushing downwards the inlet 11) and pull outwards;  
**I)** set current 8) as motor nominal current (sometimes you must set the current +10% of nominal one as at low speed the current could rise lightly);  
**L)** put regulation hand grip 6) counterclockwise. Feed the regulator by turning on the switch 7); motor must turn at minimum speed;  
**M)** with the trimmer it is possible to adjust minimum output voltage and therefore minimum motor speed. This trimmer is already preset on 100V outlet voltage. It is possible to reduce to 75V by turning the trimmer counterclockwise, or increasing it up to 160V by turning the trimmer clockwise. Anyway, make sure that if the motor is not turning and the potentiometer 6) is completely turned counterclockwise, the motor has to start immediately by feeding the regulator.  
**NOTE:** 100V adjustment is used only in particular cases.  
**N)** turn hand grip 6): the motor must turn fastly if it's turned clockwise, slowly if it's turned counterclockwise;  
**O)** once needed speed is set, it's important to close door 12), as to assure IP55 protection.

### WRONG OPERATION CHECKS

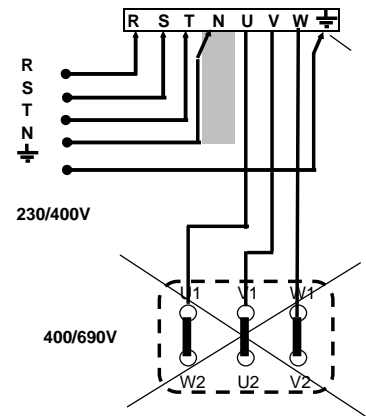
- P)** we state beforehand that some electric checks must be carried out by experts with appropriate instruments and by following the accident-prevention rules of their local contry;  
**R)** when started, the motor fails to turn. Check input voltage; the regulator switch must be on, the motor must be connected, minimum voltage must be enough. If necessary, turn the potentiometer and then adjust the trimmer for higher minimum voltage;  
**S)** when started, the motor turns but it's very noisy. **Check that neutral is connected to the motor star center**, that the three phases with identical voltages ( $\pm 5\%$ ) between UVW terminals and star center reach the motor. Check that absorbed currents on the three phases **don't** differ more than 20%.

# ELECTRONIC SPEED REGULATOR RVT6E-10E-16E

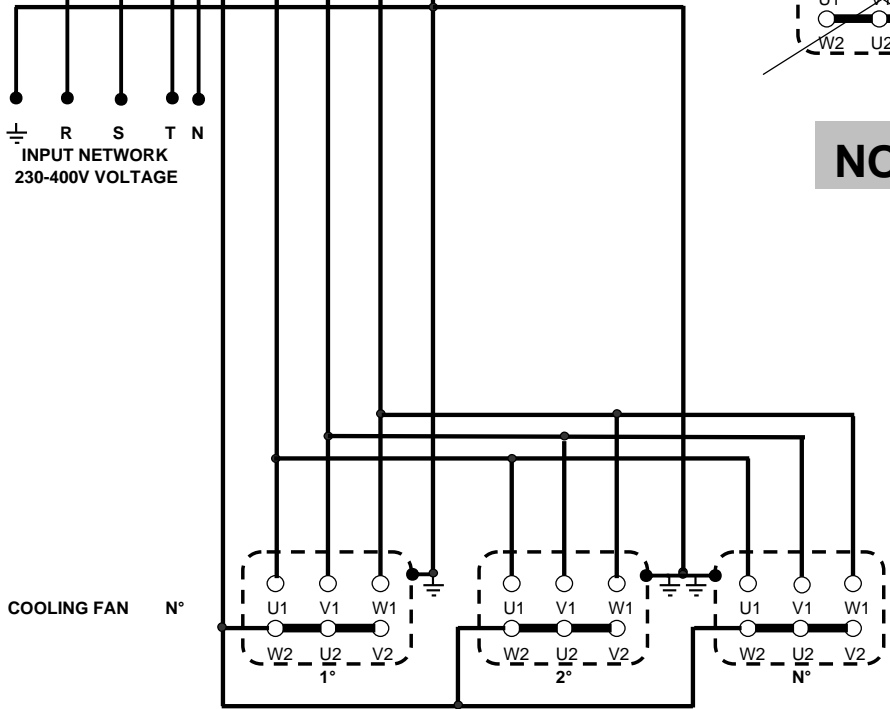
for three-phase asynchronous motors - IP55 protection casing Wall installation



**NO**



**SINGLE FAN MAXIMUM POWER 2KW**



**CONNECTION OF THE NEUTRAL TO THE CENTER OF THE ESSENTIAL STAR ENGINE (LACK OF NEUTRAL CAN CAUSE DAMAGE)**

**ELECTRICAL WIRING DIAGRAM**  
TECHNICAL DESCRIPTION ELECTRONIC REGULATOR  
MAXIMUM CURRENT 6-10-16 A - 400V (see RVT6E models - RVT10E - RVT16E)