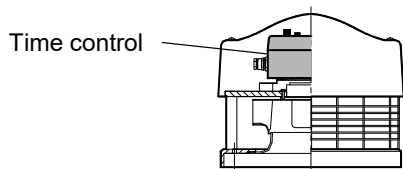




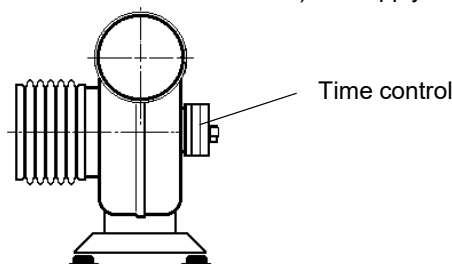
## Installation and operation

The fans VRR160/ALM-EC-ZS (VRE160/ALM-EC-ZS) with integrated time control have been developed on the basis of the proven type VRR160/ALM (VRE160/ALM). These units are preferably used in systems with variable volume flows (e.g. day/night operation).

All specifications and notes in the operating instructions "Roof fans VRR" ("Radial fans VRE / ALM") also apply to the use and operation.



Roof fan VRR



Radial fan VRE

### 1. Connection and operating elements

The whole electronical and electric parts (EC-Controller and time control device ZS160-EC) is integrated in the fan.

**Attention! The operating mode switch does not provide galvanic isolation from the mains!  
 Therefore, it is recommended to provide a repair switch on site!**

For cleaning and maintenance switch off the mode switch (position „0“).

**Attention! There is no galvanic separation!**

**Supply:** terminal L, N und PE in casing of time control device ZS160-EC

### 2. Manual operation

- Operating mode switch in position **I | 100%** --> fan is running with maximum speed

### 3. Time operation (2-stage operation, day/night operation)

- Operating mode switch in position **I - timer**
- The setpoint potentiometers are used in conjunction with air measurements to set the desired speeds for day and night operation.
- The time switch offers the following programming options:
  - daily and weekly programme
  - automatic summer/winter time changeover
- Manual switching is possible via the C1 button:
  - by briefly pressing the key, the clock switches to manual mode
  - by pressing the C1 key for a longer time, the current switching state is locked and retained
  - in the unlocked state, the clock automatically switches back to the automatic mode at the time of the next programmed switching operation. automatically returns to the automatic programme

You will find more detailed information on this, as well as notes on time switch programming, in the enclosed clock description. The summer/winter time changeover according to EU regulations and the switching cycle shown below are programmed in at the factory. and the switching cycle shown below are programmed in. In the de-energised state, the clock is in **energy-saving mode**. Activation takes place (with a time delay) after mains connection or manually by pressing the ←-key.

