

12.  
12.8.1-GB

**Electronic controller for variable voltage 1~ motors**  
**Speed controller with input 0-10 V and controller**  
**(P-controller) for refrigeration and air conditioning**

Type: **αmini**  
**PKE-2.5V(E)**

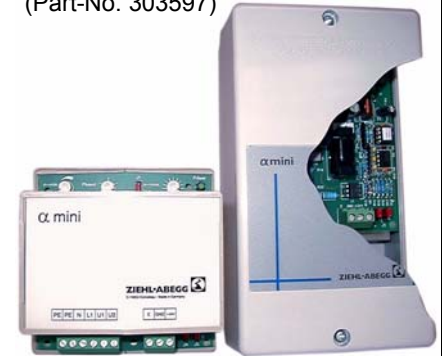
**Examples of applications for controlling variable voltage 1~ fans**

- **Function: Speed control**
  - Manual adjustment of output voltage using integral or external control signal (0-10 V) e.g. of Ziehl-Abegg controllers type „Unicon“ (for: extraction systems, warm-air heaters, air curtain installations, central extraction systems, variable air volume systems (VVS), clean room systems, laminarflow-work benches)
  - Operation with two adjustable output voltages and external switch-over by potential-free contact
- **Function: Temperature-/ pressure control**
  - PKE-2.5VE (Part-No. 303500) and PKE2.5V (Part-No. 303512) for increasing speed for increasing actual value (cooling function)
    - Temperature control for: extraction systems, equipment cooling, liquid-cooling, chillers
    - Pressure control refrigeration for: condensers
  - Special version PKE-2.5VE (Part-No. 303597) for increasing speed for decreasing actual value (heating function)
    - Temperature control for warm-air heaters

**Equipment**

- Voltage supply for external units e.g. sensors +24 V ( $I_{max} = 20$  mA)
- Internal LEDs for operation and fault
- Semiconductor fuse
- Power connection prevents incorrect connection (can be connected with a plug)
- **Function: Speed control:**
  - Input for external speed setting signal: 0-10 V ( $R_i > 100$  k $\Omega$ ), 0-20 mA, 4-20 mA
  - Connection 24 V DC for speed setting via external potentiometer (10 k $\Omega$  Poti with dropping resistor 13 k $\Omega$ )
- **Function: Temperature-/ pressure control:** (air velocity control and air volume control not possible)
  - Input for sensor signal 4-20 mA, 0-10 V, KTY10-6 (temperature sensor) e.g. for:
    - pressure sensor for head pressure controlling (e.g. type DSF2-25)
    - temperature sensors type „TF..“ (e.g. room-, immersion-, contact sensor, air duct sensor)

Type: **PKE-2.5VE** **PKE-2.5V**  
Part-No. 303500 303512  
(Part-No. 303597)



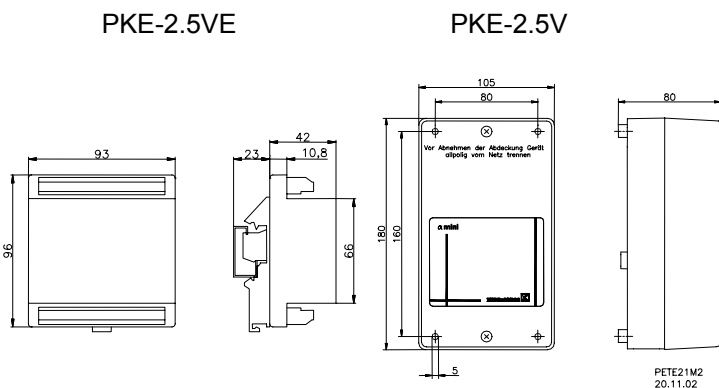
**Technical data**

- Line voltage 1~ 230 V (-15 % / +10 %), 50/60 Hz
  - Rated current 2.5 A (at line voltage 230 V)
  - Min. motor current 0.2 A
  - Stepless controlled output voltage approx. 25-100 %
  - Max. heat dissipation approx. 10 W
  - Max. permissible ambient temperature 40° C
  - Permissible rel. humidity 85 % no condensation
  - Interference emission EN 50081-1
  - Interference immunity EN 61000-6-2
  - Harmonics current EN 61000-3-2
  - Housing protection / weight
- |           |       |         |
|-----------|-------|---------|
| PKE-2.5V  | IP 54 | 0.50 kg |
| PKE-2.5VE | IP 20 | 0.26 kg |

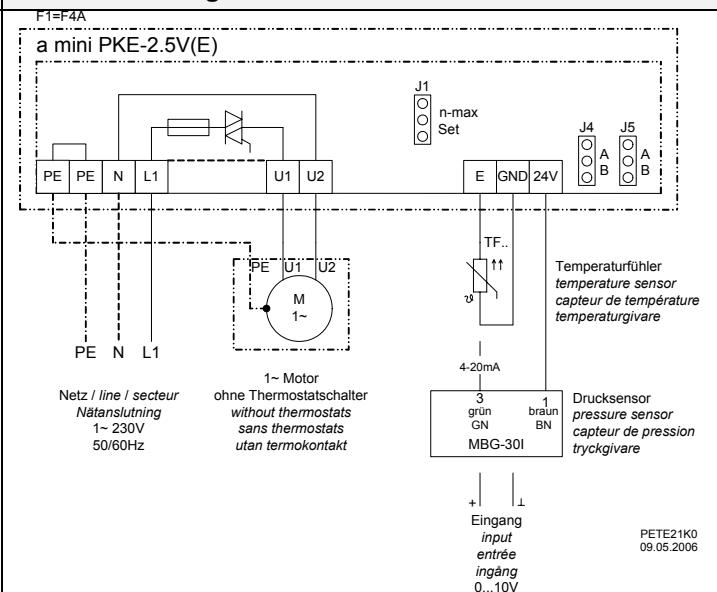
**Settings**

- **Function: Speed control:**
  - Min. and max. output voltage
  - Output voltage using external signal or integral potentiometer
- **Function: Temperature-/ pressure control:**
  - Set value in measuring range of sensor, temperature control 0° C to 60° C
  - Control range (P-component) 10-30 % in measuring range of sensor, temperature control 6 - 18 K
  - Min. output voltage

**Dimension sheet [mm]**



**Connection diagram**



Ziehl-Abegg AG  
Heinz-Ziehl-Straße  
D-74653 Künzelsau

Tel.: +49 (0) 7940 16-0  
Fax: +49 (0) 7940 16-200  
info@ziehl-abegg.de

http://www.ziehl-abegg.de **ZIEHL-ABEGG**

