

9. Transformer based controller for 3~ motors
9.3.2-GB 5-step controller inclusive integral thermistor releasing unit

Type: **R-DK...KT(G)**

Examples of applications for controlling 3~ fans in 5-steps

Manual 5-step speed change-over of one or more 3~ fans e. g. in: heat exchangers (as warm-air heaters), hoods, ventilation of rooms.

An integral thermistor releasing unit type U-EK230E with ATEX-approval can be used for the temperature monitoring of motors in explosion protected range. Six thermistors (DIN 44081 or DIN 44082) can be connected in series. According to the type of motor at least two or three single sensors are installed. Fans used in explosion protected range must have three single sensors. That means at most two motors of this type can be connected.

The device includes potential-free and 230 V power on contacts for the connection of damper control motors or gas valves (hoods application) (see on back).

Equipment

Enclosed version IP21 / 54

Transformer based controllers for voltage controllable 3~ fans

- 5-step switch for manual speed control
- Remote control (ON/OFF) via potential-free contact (terminals „RT“-„RT“).
- Motor protection using thermistor connection (terminals „T1“-„T2“). If one of the thermistor is released, the unit switches off and not on again. Restart after cooling the drive unit by switch-off and after that switch on the mains voltage or by step-switch („reset“).
- A power on lamp is integrated.
- Automatic switch on after power failure.
- Additional power on contact
 - Potential-free changer
 - 230 V switched and constant voltage



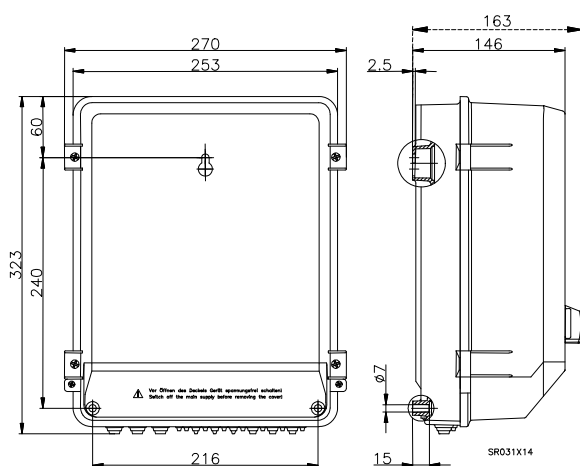
Technical data

- Line voltage 3~ 400 V, 50/60 Hz
- Output voltage 95 V - 145 V - 190 V - 240 V - 400 V
- Max. load of the power on contacts
 - Potential-free changer (terminals 1, 2, 3) 250 V AC / 2 A
 - 230 V switched and constant voltage max. 1 A (terminals N↓, L↓, U↓)

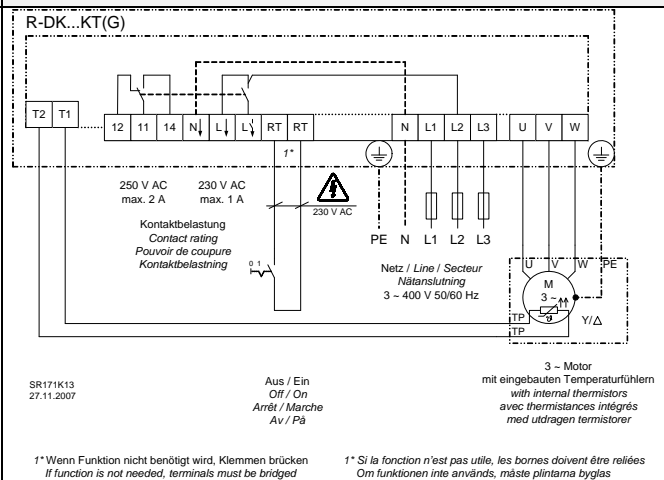
- Max. ambient temperature +40° C
- Housing top consists of plastic, colour light grey, bottom aluminium die casting

Type	Part-No.	Rated current	Max. line fuse	Max. heat dissipation approx.	Protection class	Weight
R-DK3KTG	302567	3 A	6 A	60 W	IP54	13.0 kg
R-DK4KT	302568	4 A	8 A	75 W	IP21	13.0 kg
R-DK5.2KTG	302569	5.2 A	13 A	80 W	IP54	18.5 kg
R-DK7KT	302570	7 A	16 A	110 W	IP21	18.5 kg

Dimension sheet [mm]



Connection diagram



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


Connection example for damper control motors



Connection of damper control motors (different models) is possible via the potential-free contacts or via the 230 V contacts of the power on relay. This relay rises, if the device is activated and the fan is running. By switching off via remote control (terminals „RT“-„RT“) or in case of motor fault the relay falls off.

For damper control motors with „single-wire-control“ connection with constant voltage (also in switch position „0“) for „damper CLOSE“.

For motors with „single-wire-control“

- damper „OPEN“: if fan is running, 230 V at terminal 
- damper „CLOSE“: constant voltage at terminal L, if fan is not running (also in switch position "0")

For motors with „spring return“

- damper „OPEN“: if fan is running, 230 V at terminal 
- damper „CLOSE“: via spring return (if no voltage at )

For motors with „2-wire-control“

- damper „OPEN“: if fan is running, voltage at terminal 3
- damper „CLOSE“: voltage at terminal 2, fan is not running (also in switch position "0")

