CDR5E E... M

Single phase speed controller



Use

- **CDR5E E... M** series speed controllers are applied for air flow control of single phase fans by means of step speed control. The controller has five speeds. Speed is set by means of rotating the control knob at the casing front panel. Several fans can be controlled synchronously in case their total consumption current does not exceed the maximum permissible value of the controller current.

Design and control

- Casing is made of steel with polymeric coating. The controller has five speeds with the output voltage 110 V – 130 V – 160 V – 190 V – 230 V (for CDR5E E10 M and CDR5E E13 M – 110 V – 140 V – 170 V – 190 V – 230 V). The controller is equipped with an operation indication lamp, a speed control knob.

Mounting

- The controller is designed for indoor mounting. Installation shall be performed with respect to the free air circulation for inner circuit cooling.

Protection

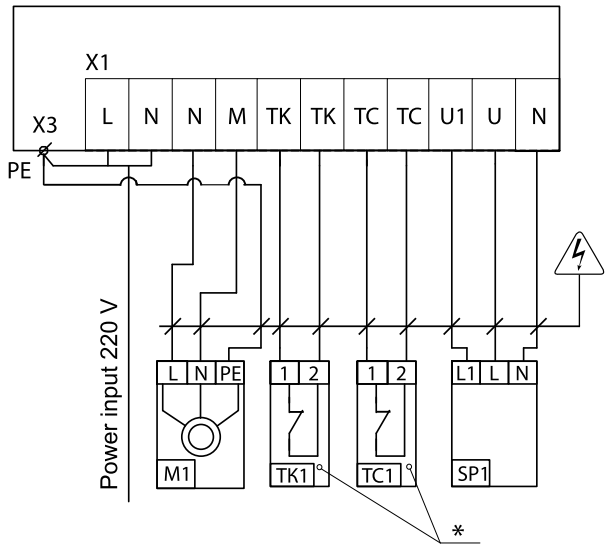
- The integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated. After the temperature drops to the operating level the motor restarts.
- The controller has the following supplementary functions:
  - terminals for connection to the room thermostat or to the icing protection thermostat. In case of the circuit breaking the power supply to the motor is cut, except for CDR5E E10 M and CDR5E E13 M;
  - terminals of 230 V, max. 2A/3A/4A for connection and controlling such external equipment as actuator driven air damper;
  - provision for remote speed control (refer the connection options), except for CDR5E E10 M and CDR5E E13 M.

Technical data

Parameters	CDR5E E2 M	CDR5E E3 M	CDR5E E4 M	CDR5E E10 M	CDR5E E13 M
Voltage [V / 50(60) Hz]	1~230	1~230	1~230	1~230	1~230
Rated current [A]	2	3	4	10	13
Overall dimensions L×W×H [mm]	226×144×120	241×164×138	241×184×132	325×300×185	325×300×185
Maximum ambient temperature [°C]	40	40	40	35	35
Protection rating	IP21	IP21	IP21	IP54	IP54
Weight [kg]	3.4	4.1	4.5	13.2	17.4

Controller wiring diagram

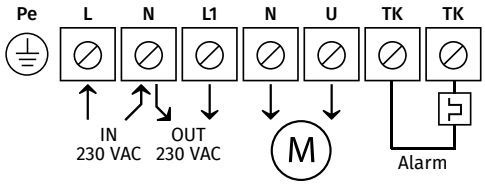
CDR5E E2 M, CDR5E E3 M, CDR5E E4 M



M1: Motor
TK1: Motor overheating protection
TC1: Room thermostat or "heater icing danger" thermostat
SP1: Air damper actuator

* Controller operation without thermal motor protection (TK1) is possible with the jumper between TK terminals. Controller operation without thermostat TS1 is possible in case of jumper installation between TS terminals.

CDR5E E10 M, CDR5E E13 M



L: Power (230 VAC/50-60 Hz)
N: Power, neutral
L1: Non-adjustable output
N: Adjustable motor output, neutral
U: Adjustable motor output, phase
TK: TK control for thermal protection of motors
Pe: Ground terminal