

SPEED CONTROLLER

EN

CDTE E .. TP

USER'S MANUAL

BLAUBERG

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This user's manual is a main operating document intended for technical, maintenance, and operating staff.
The manual contains information about purpose, technical details, operating principle, design, and installation of the CDTE E .. TP unit and all its modifications.
Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

PURPOSE

Electric fan speed controllers of the CDTE E .. TP series are designed for single-phase motors with a control voltage of up to 10 A.
The power supply voltage is determined by the controller automatically (110-240 VAC / 50-60 Hz).
The motor speed can be regulated manually with a handle, ranging from the lowest to the highest.
The controllers have a 230 VAC output for an air damper actuator, water valve actuator etc.
Electronic controllers of the CDTE E .. TP series also have an ON / OFF switch and enable soft or quick start of the motor.

DELIVERY SET

Speed controller	1 pc.
User's manual	1 pc.
Packing box	1 pc.

TECHNICAL DATA

	CDTE E1.5 TP	CDTE E3.0 TP	CDTE E5.0 TP	CDTE E10.0 TP
Supply voltage [V/50-60 Hz]	110-240			
Rated current [A]	1.5	3.0	5.0	10.0
Unregulated output [A]	2			
Fuse rated values	F-3.15 A-H 250 VAC	F-5.00 A-H 250 VAC	F-8.00 A-H 250 VAC	(6.3*32) F-16.00 A-H 250 VAC
Ambient temperature [°C]	–20 ... +35 °C at RH 5 – 95 % (no condensation)			
Protection rating	IP54			

DESIGN AND OPERATING PRINCIPLE

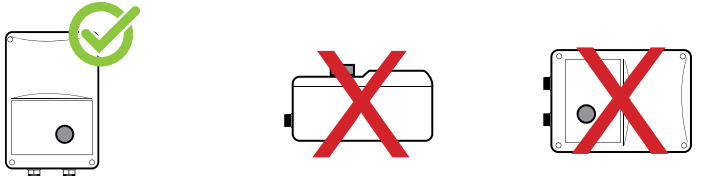
All series CDTE E .. TP speed controllers regulate the rotational speed of single-phase motors by changing the power supply voltage, which is done by adjusting the phase angle. The power supply source is determined by the controller automatically. The minimum speed can be controlled by means of an internal trimmer. The output is controlled by means of a potentiometer in the range between the minimum output voltage and the supply voltage. The controller has an unregulated output for connecting actuators for valves, bulbs etc. The controller has two starting modes: quick start and soft start, which can be selected by putting or removing the jumper from the printed circuit board.
The device is only rated for indoor use.

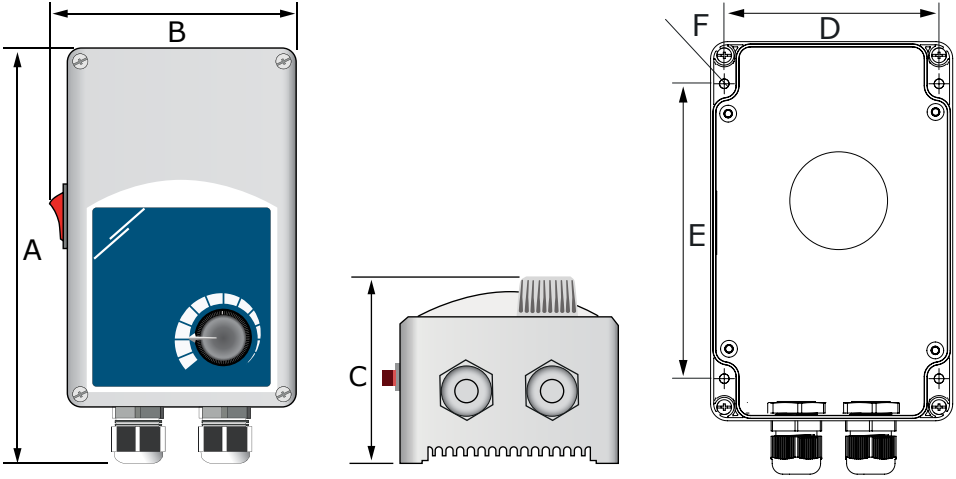
INSTALLATION AND SET-UP

The controller is installed indoors.
Installation must be carried out in a way that ensures free air recirculation, which cools down the inner elements.
Do not install the controller above heating equipment or in areas with insufficient air convection.
WARNING! Prior to the initial power-up after transportation or storing at negative temperatures, keep the unit in appropriate operation conditions for at least 4 hours.
Visually inspect the unit to ensure the casing is intact and not damaged.
The external lead-in must be equipped with a circuit breaker built into the stationary wiring.

INSTALLATION INSTRUCTION

1. Unscrew and take off the front cover and open the casing.
Be careful with the wires connecting the potentiometer to the printed circuit board
2. Open the cover and secure the controller on the wall or panel with the screws and dowels from the delivery set.
Pay attention to the correct installation position and mounting dimensions of the device.





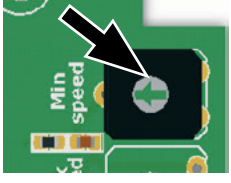
Dimensions [mm]	A	B	C	D	E	F
CDTE E1.5 TP; CDTE E3.0 TP	162	96	75	71	108.8	4.2
CDTE E5.0 TP	162	96	93	71	108.8	4.2
CDTE E10.0 TP	205	124	97	102	140	4.6

3. Insert the cables into the cable glands and lay the wiring according to the wiring diargam.
3.1 Connect the motor / fan;
3.2 Connect the power supply terminals;
3.3 Connect the unregulated output if necessary.
It can be used for powering a valve, bulb etc.

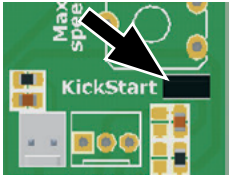
WARNING!

Before connecting the device, make sure it is properly connected, and cables of appropriate diameter are used.

4. Set a minimum speed using a trimmer (if necessary). Factory settings: 45%.



5. Select a start mode (quick or soft) using a jumper. Factory settings: "Quick start enabled"; to disable it, remove the jumper. The duration of a quick or soft start is 8-10 sec.

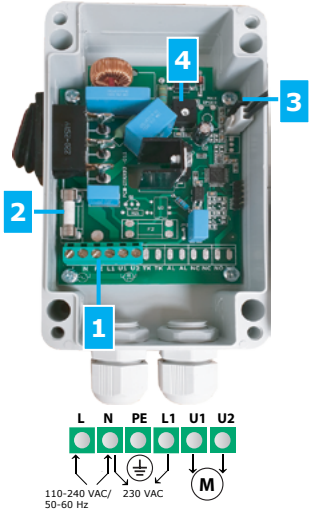


6. Put the cover back and secure it with screws. Tighten the cable glands.

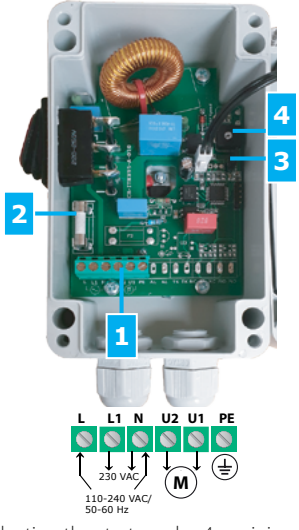
CONNECTION TO POWER MAINS

WARNING! To switch off the ON / OFF switch (for 1.5 A & 3.0 A versions only!), connect the 230 VAC power supply to the unregulated output (L1). If this is the case, do not connect the power supply unit to L.

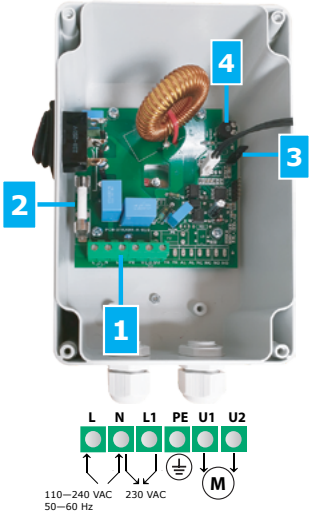
CDTE E1.5 TP; CDTE E3.0 TP



CDTE E5.0 TP



CDTE E10.0 TP



1 – terminal block; 2 – fuse; 3 – jumper for selecting the start mode; 4 – minimum speed trimmer.
L – Input voltage; N – Neutral; L1 – Unregulated output; PE – Grounding terminal; U2 – Regulated motor output – phase; U1 – Regulated output for the motor.
Connection – Cable cross section: at most 2.5 mm^2. The cable gland tightening range: 5–10 mm.

TROUBLESHOOTING

Problem	Possible reasons	Solution
The unit does not run.	Connection is limited or down.	Ensure proper connection to power mains.
	The fuse has blown.	Replace the fuse.
The fan does not rotate when the controller is ON.	The minimum fan speed is wrong.	Adjust the minimum fan speed.

WARNING! Use fuses of the type and rating specified above.

STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from -40 ˚C to +50 ˚C and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapors and chemical mixtures provoking corrosion, insulation, and sealing deformation.
- Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.
- Follow the handling requirements applicable for the particular type of cargo.
- The unit can be carried in the original packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

MANUFACTURER'S WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Compatibility (EMC) Directive 2014/30/EU of the European Parliament and of the Council, Low Voltage Directive (LVD) 2014/35/EU of the European Parliament and of the Council and CE-marking Council Directive 93/68/EEC. This certificate is issued following test carried out on samples of the product referred to above.

The manufacturer hereby warrants normal operation of the unit for 24 months after the retail sale date provided the user's observance of the transportation, storage, installation, and operation regulations. Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation, the user is entitled to get all the faults eliminated by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation. The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

The warranty repair does not include:

- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair, the user must provide the unit, the user's manual with the purchase date stamp, and the payment paperwork certifying the purchase. The unit model must comply with the one stated in the user's manual. Contact the Seller for warranty service.

The manufacturer's warranty does not apply to the following cases:

- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismounted by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- Damage to the unit casing and internal components caused by the user.
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.

- Unit misuse.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment paperwork certifying the unit purchase.



FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT



USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP

Quality Inspector's Stamp

Sold by
(name and stamp of the seller)

Manufacture Date

Purchase Date



