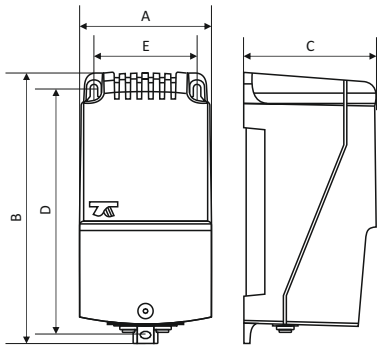
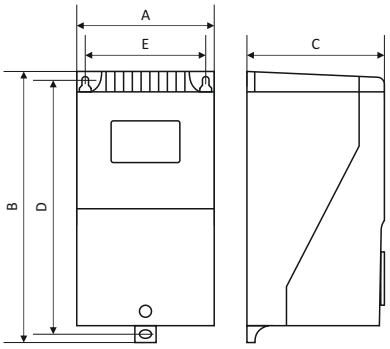
ARE N

Electronic fan speed controllers



ARE 3,0N, ARE 5,0N



ARE 10,0N

Features:

- kick-start (full supply voltage for the first 10 seconds),
- smooth control,
- control by potentiometer,
- 0-10VDC signal control,
- for single-phase AC motors,
- for the industrial environment,
- possibility of setting the minimum output voltage,
- IP54 protection grade.

Description:

Microprocessor, thyristor fan speed controllers for single-phase AC motors, using the phase method for control. They provide smooth control of fans using a potentiometer or a 0-10VDC signal. The built-in KickStart function applies full power supply voltage for the first 10 seconds, ensuring correct and safe start-up. Designed for use in industrial environments, with the ability to set the minimum output voltage.

Applications:

- agriculture - animal breeding,
- gastronomy,
- underground garages.

Art. Nr	Name	Current	Adjustment range	Dimensions [mm]					Weight [kg]
		[A]	[V]	A	B	C	D	E	
17000-1383	ARE 3,0N	3	90 - 230	73	141	72,5	128	58	0,35
17000-1384	ARE 5,0N	5	90 - 230	73	141	72,5	128	58	0,35
17000-1385	ARE 10,0N	10	90 - 230	90	173	89	157	71	0,85

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Due to the constant development of the construction and changes in technical requirements, Breve Tufvassons reserves the right to change the above parameters.

OPERATING MANUAL

ARE N

1. Application:

ARE regulators are designed to control speed of single-phase ventilator induction motors. Output voltage is controlled by a potentiometer or a 0-10V DC signal from an external device. The regulators feature a "Kickstart" function that enables the safe startup of the motor. Speed regulation is achieved through phase-shift control.

2. Technical data:

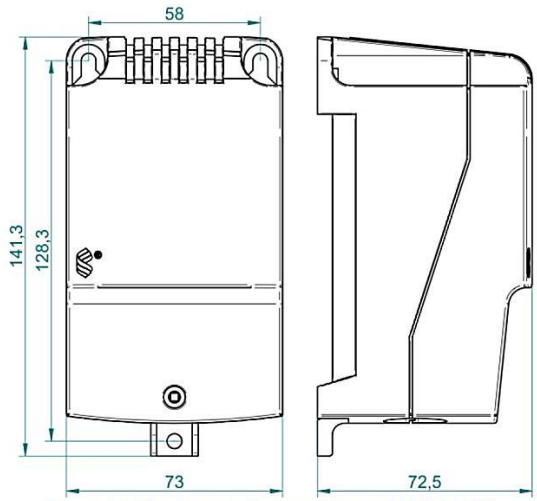
2.1. Electric parameters:

Type	U_{PRI} [V]	Output voltage range V_{OUT} [V_{RMS}]	Rated output current I_{OUT} [A]
ARE 3,0N	230	90-230	3,0
ARE 5,0N	230	90-230	5,0
ARE 10,0N	230	90-230	10,0

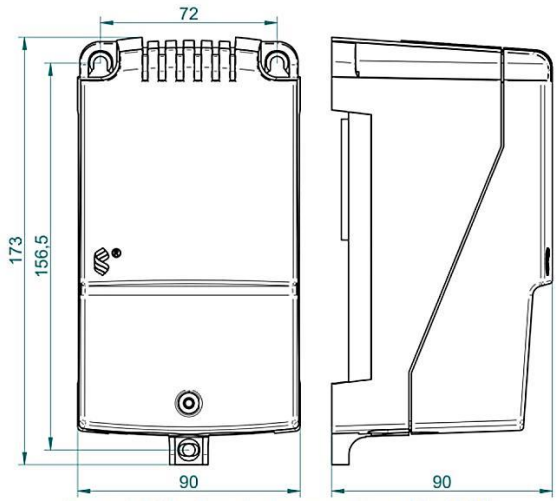
2.2. Additional technical data:

Degree of protection	IP54
Ambient temperature	+35°C
Protection	Short circuit protection.
Manufactured in compliance with	EN 55032, EN 55035, EN IEC 61000-3-2, EN 61000-3-3, EN IEC 62368-1
Insulation class	II
Regulation	Potentiometer, 0-10VDC signal

3. Dimensions:



Drawing 1 Dimensions of the ARE 3.0-5.0N regulator



Drawing 2 Dimensions of the ARE 10.0N regulator

4. Installation:

- Pay attention to the controller's ambient temperature. The casing may become hot during operation. When installing multiple units next to each other, it is recommended to maintain a minimum distance of 20 cm. **Install in a vertical position!**
- Mount the regulator to a flat surface (wall, etc.) using screws. Open the regulator casing by unscrewing the cover screw.
- Insert the wires through the grommets (max cable diameter – 1,5mm^2).
- Make the connections according to the appropriate diagram.
- Place short-circuit protection devices in the power supply circuit.
- When connecting the setpoint device, ensure the correct connection of the 0-10VDC signal. Use an additional cable gland for the 0-10VDC signal cable.

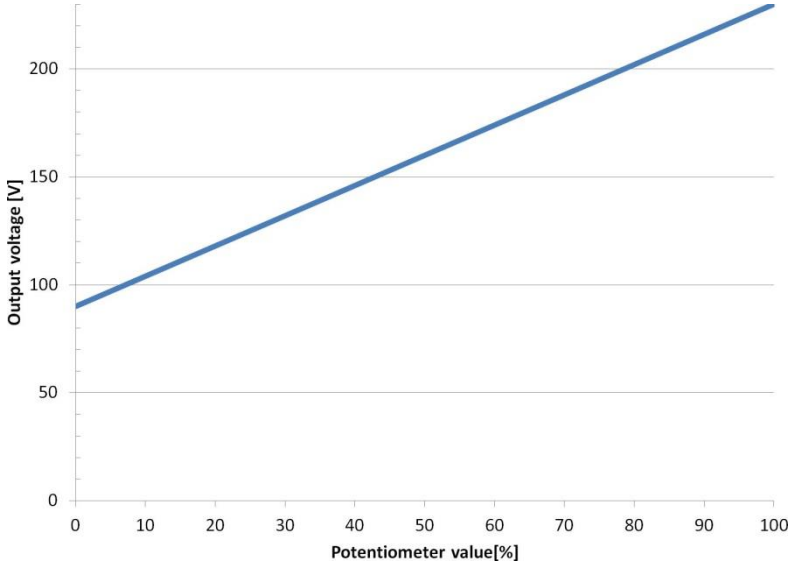
5. Control via potentiometer or 0-10VDC signal.:

Switching SW1 to the ON position changes the control signal from the potentiometer to the 0-10VDC signal.

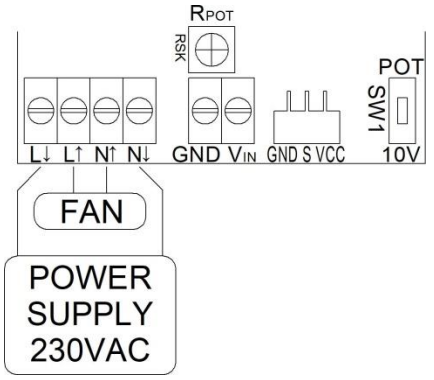
6. Changing the minimum output voltage value.:

To change the minimum output voltage value, turn the potentiometer labeled RPOT (RSK) located on the regulator's circuit board.

7. Control characteristic:



8. Connection diagram:



Connectors:

L↓ – N↓ - regulator output,
N↑ – L↑ - regulator power supply - 230VAC 50/60Hz,
GND – V_{IN} - analog input 0-10VDC,
GND – S – VCC - analog input for the potentiometer,
R_{POT} - potentiometer for adjusting the minimum output voltage value of the regulator,
SW1 - switch SW1: 0-10VDC/potentiometer.

9. Safety:

9.1. Installation of the regulator should be done by qualified electrician.
9.2. Installation of the regulator while live threatens with electric shock.
9.3. The maximal output current cannot exceed the rated current of the regulator.

10. Maintenance:

The original box used by the producer provide safety transport and storage. For storage, use the original boxing only. Keep in temperatures from -5°C do +50°C.