

RDCV

Residential fan speed controller



Key features

- A 7-segment display and 3-button keyboard interface
- User-friendly menu for parameter setting
- Modbus RTU (RS485) communication
- 3SModbus software application for easy set up and monitoring
- Kick start or soft start with adjustable duration
- Selectable output: analogue / digital (PWM)
- Stepless output or output divided in 2–10 steps
- Adjustable start output value
- Minimum and maximum output settings as a percentage of maximum output value (U max)
- Suitable for inset or surface mounting

Technical specifications

Inrush current	Max. 15 A (100 VAC) Max. 25 A (240 VAC)	
No-load (stand-by) power	110 VAC - 60 Hz <1,1 W 230 VAC - 50 Hz <1,2 W	
Load resistance	0–10 VDC mode $\geq 10 \text{ k}\Omega$ 0–20 mA mode $\leq 500 \Omega$ PWM mode $\geq 10 \text{ k}\Omega$	
Output	0–10 VDC	Min: 0–8 VDC
		Max: 2–10 VDC
	0–20 mA	Min: 0–16 mA
		Max: 4–20 mA
	0–100 % PWM	Min: 0–80 % PWM
		Max: 20–100 % PWM
Selectable PWM output	Open collector Internally supplied (12 VDC)	
Protection standard	IP44 / IP54 (according to EN 60529)	
Ambient conditions	Temperature	-10–40 °C
	Rel. humidity	5–80 % rH (non-condensing)

Wiring and connections

L, N	Power supply (110–230 VAC $\pm 10 \%$ - 50 / 60 Hz)
Ao, GND	Analogue / digital output (0–10 VDC / 0–20 mA / PWM)
A	Modbus RTU (RS485) signal A
/B	Modbus RTU (RS485) signal /B
Connections	Cable cross section: max. 2,5 mm ²

Caution: If an AC power supply is used with any of the units in a Modbus network, the GND terminal should NOT BE CONNECTED to other units on the network or via the CNVT-USB-RS485 converter. This may cause permanent damage to the communication semiconductors and / or the computer!

The RDCV series are residential digital controllers designed to control EC-fans, lighting or other applications with an analogue / digital (PWM) output signal (0–10 VDC / 0–20 mA / PWM). They feature a wide supply voltage range 110–230 VAC - 50 / 60 Hz and a variable output signal between a selectable minimum and maximum level (percentage of the maximum output value). The settings are easily adjustable either through a 3-button interface equipped with a 7-Segment LED display or via 3SModbus software application.



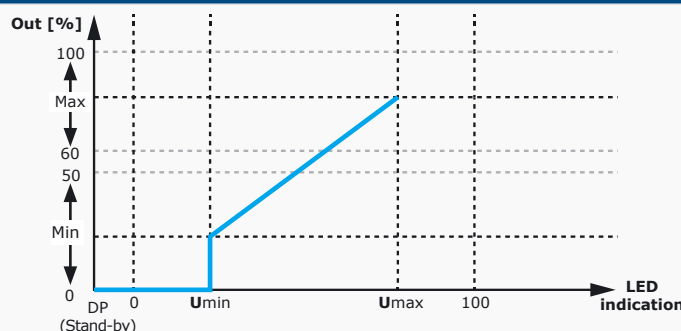
Article codes

	Supply voltage, Us	Enclosure
RDCV9-AD-WH	110–230 VAC $\pm 10 \%$ - 50 / 60 Hz	White
RDCV9-AD-BK	110–230 VAC $\pm 10 \%$ - 50 / 60 Hz	Black (anthracite)

Area of use

- Manual control of the motor / fan speed in HVAC applications
- For indoor use only

Operational diagram



Standards

- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC: EN 61326
- WEEE Directive 2012/19/EU
- RoHS Directive 2011/65/EU





Settings

1 – OK button		- Selects / deselects menu items; - Toggle the output display: Output value / Output step - Setting confirmation by pressing for 4 s; - Reset to factory settings (except for id, baud rate & parity settings) by pressing for 8 s - Setting Run / Stand-by mode by pressing for 4 s
2 – Down button		Decreases values; navigates through the menu
3 – Up button		Increases values; navigates through the menu
4 – 7-segment display		Displays the output value, menu items and settings
Up & Down combination		Menu access; goes back to (up level) menu

Modbus registers



The parameters of the unit can be configured through the 3SModbus software platform. You can download it from the following link:
<http://www.sentera.eu/english/hvac-software-downloads.html>

You can find register maps in the mounting instructions. Download them from:
<http://www.sentera.eu/products>

Accessories

Logic controllers, switches, timers, potentiometers, converters & relay modules

- CNVT-PWM-010V converter
- CNVT-MOD converter

Combine with

Logic controllers, switches, timers, potentiometers, converters & relay modules

- DTA series
- DTAP series
- MCS series
- STEC series

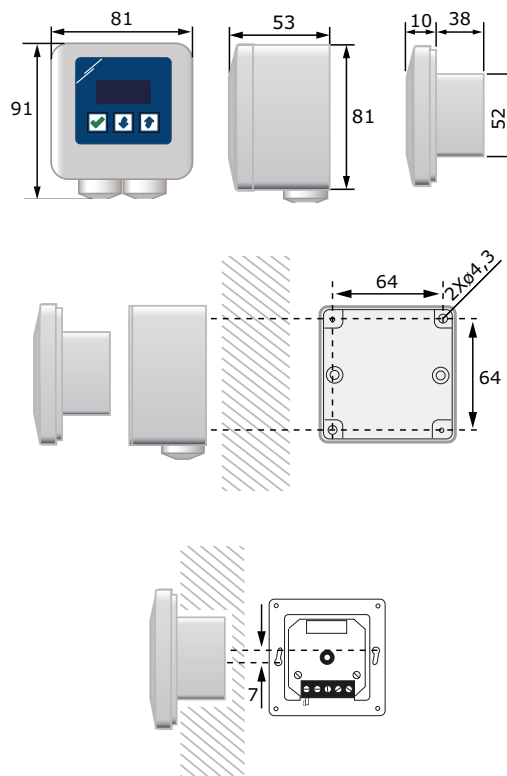
Electronic fan speed control

- MFC series
- EVS(S) series
- MVS(S) series
- SE-S series
- -TE1S, TE2S
- -TC1S, TC2S
- -CO1S, CO2S
- -DP1S, DP2S
- -RH1S, RH2S

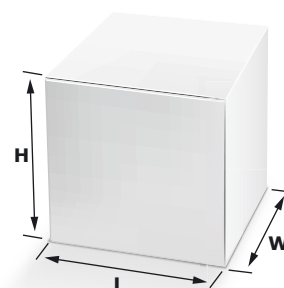
Electronic heater controllers

- EH2 series
- EH3 series
- AH2 series

Fixing and dimensions



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
RDCV9-AD-WH RDCV9-AD-WH	Unit (1 pc.)	95	85	70	0,12 kg	0,15 kg
	Carton (10 pcs.)	492	182	84	1,20 kg	1,63 kg
	Box (120 pcs.)	590	380	505	14,40 kg	19,10 kg