

RDCV

Residential analogue/digital controller

RDCV are digital potentiometers that control EC fans, actuators, lighting or other applications with an analogue (0–10 VDC / 0–20 mA / PWM) signal. They feature a wide supply voltage range 110–230 VAC / 50–60 Hz and a variable control output signal between an adjustable minimum and maximum level. The control signal is regulated either steplessly or in 2 to 10 equal steps. The settings are easily adjustable either via a 3-button interface equipped with a 7-Segment LED display or via Modbus RTU communication.

Key Features

- User-friendly menu using a 3-digit, 7-segment LED display with 3-button keyboard interface
- Selectable output: analogue / modulating (PWM)
- Adjustable minimum and maximum output values
- Suitable for inset or surface mounting
- Stepless output or output in 2–10 steps
- Adjustable start output value or start output step
- Display can be toggled between output value and step
- Modbus RTU (RS485) communication for integration with BMS

Area of Use

- Manual control for HVAC applications
- For indoor use only

Technical Specifications

Supply voltage	110–230 VAC $\pm 10\%$ / 50–60 Hz	
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: 4–10 VDC
	0–20 mA	Min: 0–16 mA Max: 8–20 mA
	0–100 % PWM	Min: 0–80 % PWM Max: 20–100 % PWM
	Open collector Internally supplied (12 VDC)	
Selectable PWM output		
Protection standard	IP44 / IP54 (according to EN 60529)	
Ambient conditions	Temperature	-10–40 °C
	Rel. humidity	5–80 % rH (non-condensing)

Standards

- Low Voltage Directive 2014/35/EC
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- WEEE Directive 2012/19/EU
- Commission Delegated Directive (EU) 2015/863 (RoHS 3) of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances



Article Codes

Article code	Enclosure
RDCV9-AD-WH	White
RDCV9-AD-BK	Anthracite

Wiring and Connections

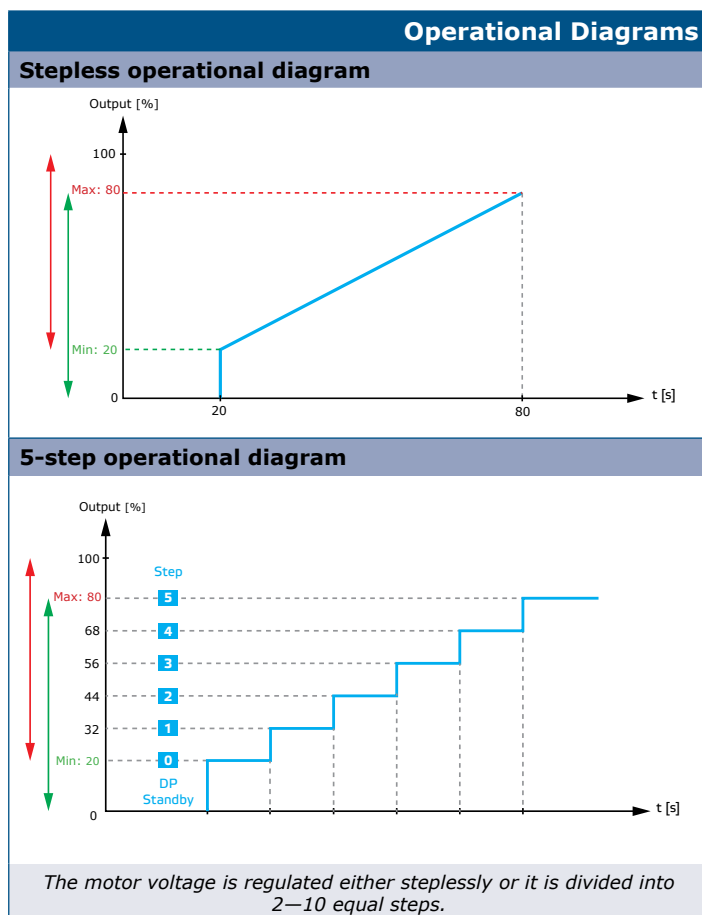
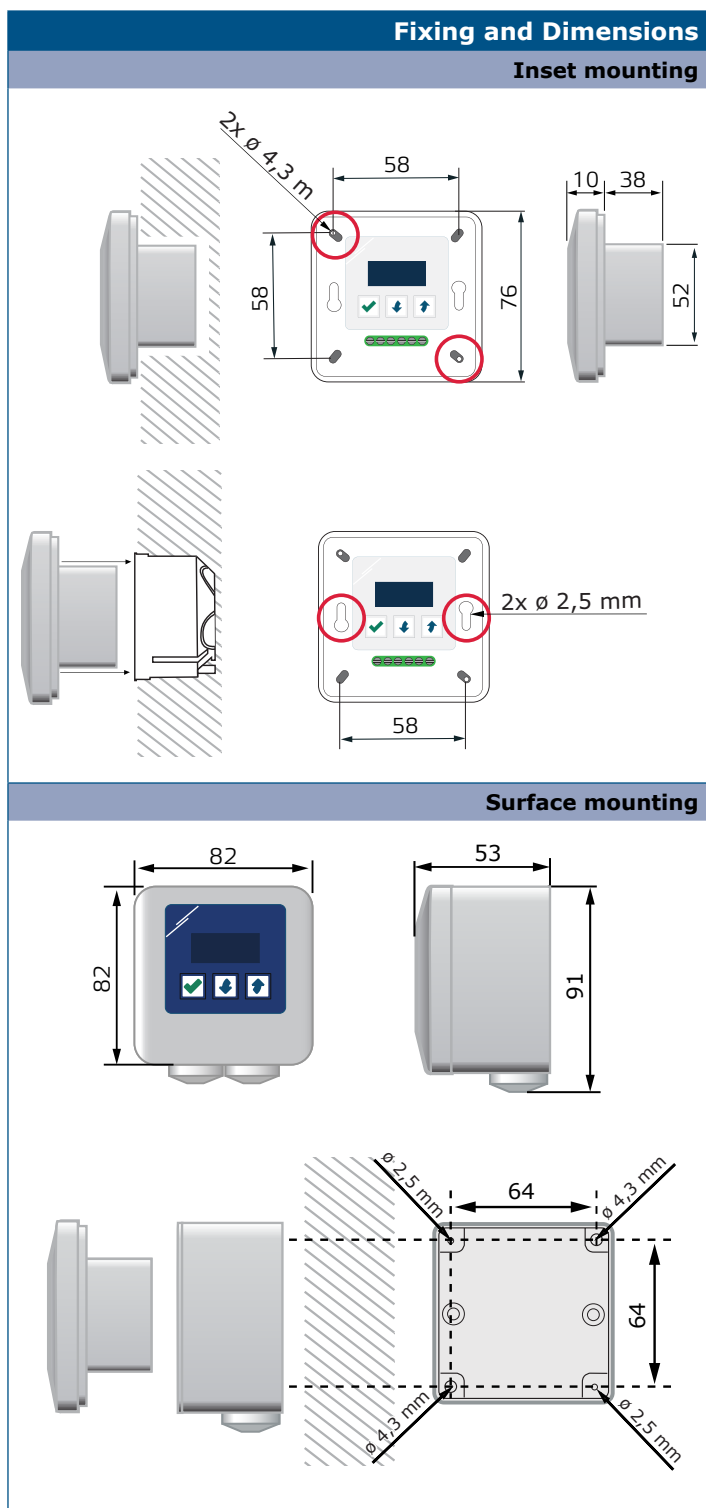


L, N	Power supply: 110–230 VAC $\pm 10\%$ / 50–60 Hz
Ao, GND	Analogue / modulating output: 0–10 VDC / 0–20 mA / PWM
A, /B	Modbus RTU (RS485)
Connections	Cable cross section: max. 2,5 mm ²

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!

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Application Example

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Controller



EC fan



0—10 VDC /
0—20 mA / PWM

