



SPV-8-010-CP

230 VAC potentiometer with Modbus RTU and dry contact

The SPV-8-010-CP potentiometer is intended for stepless control of EC motors requiring a 0–10 VDC, 0–20 mA or 0–100 % PWM control signal. The minimum output values can be adjusted via Modbus within the ranges: 0–4 VDC / 0–8 mA / 0–40 % PWM and the maximum output values – within 6–10 VDC / 12–20 mA / 60–100 % PWM. In the leftmost position it switches a dry contact for remote on / off switching of external equipment.

Key features

- Modbus RTU communication
- Dry contact output
- Selectable output type: 0–10 VDC / 0–20 mA / 0–100 % PWM
- Control from low to high or from high to low speed, selectable via Modbus RTU
- Bootloader for updating the firmware via Modbus RTU
- Adjustable minimum (Vmin) and maximum (Vmax) output value via Modbus RTU
- Flush or surface mounting
- Terminal block with push-in cage clamp connection

Technical specifications

Supply voltage	85–264 VAC / 50–60 Hz	
Selectable analogue / modulating output	0–10 VDC mode	min. load 50 kΩ ($R_L \geq 50 \text{ k}\Omega$)
	0–20 mA mode	max. load 500 Ω ($R_L \leq 500 \Omega$)
	PWM mode	PWM frequency: 1 kHz, min. load 50 kΩ ($R_L \geq 50 \text{ k}\Omega$)
Vmin	0–4 VDC / 0–8 mA / 0–40 % PWM	
Vmax	6–10 VDC / 12–20 mA / 60–100 % PWM	
Dry contact (CS) max. switching current	4 A	
Ambient conditions	Temperature	0–40 °C
	Rel. humidity	5–95 % rH (non-condensing)
Protection standard	Flush mounting	IP44 (according to EN 60529)
	Surface mounting	IP54 (according to EN 60529)

Standards

- Low Voltage Directive 2014/35/EC
 - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
 - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
- EMC Directive 2014/30/EC
 - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
 - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light industrial environments
 - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments. Amendments A1:2011 and AC:2012 to EN 61000-6-3
- RoHS Directive 2011/65/EC



Area of use

- Speed control of EC fans in ventilation systems
- Control signal for AC fan speed controllers

Wiring and connections



L	Power supply, line (85–264 VAC / 50–60 Hz)
N	Power supply, neutral (85–264 VAC / 50–60 Hz)
AO1	Analogue / modulating output (0–10 VDC / 0–20 mA / PWM)
GND	Ground AO1
A	Modbus RTU (RS485), signal A
/B	Modbus RTU (RS485), signal /B
Connections	Cable cross section: 1,5 mm ² ; pitch 3,5 mm

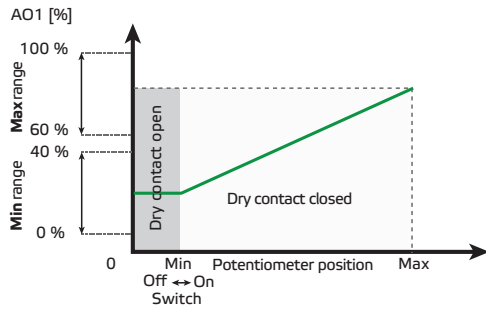


SPV-8-010-CP

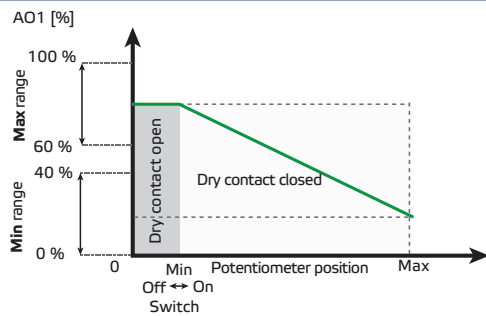
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Operational diagram

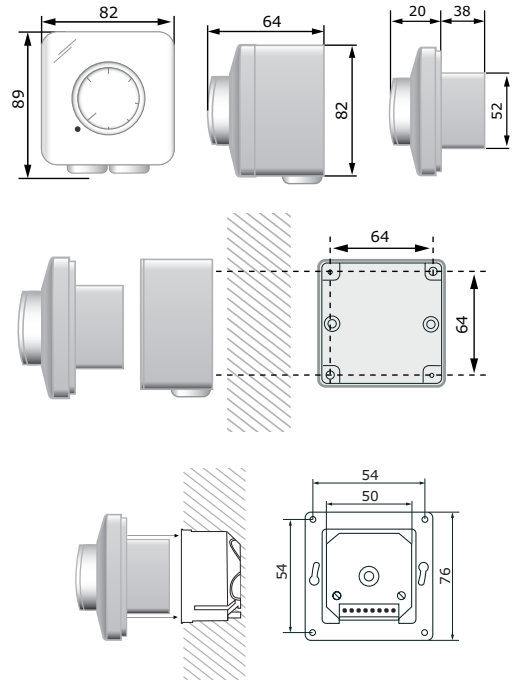
From low to high speed



From high to low speed



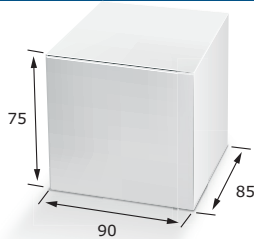
Fixing and dimensions



Global trade item numbers (GTIN)

Packaging	SPV-8-010-CP
Unit	05401003017555
Carton	05401003302262
Box	05401003503362

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SPV-8-010-CP	Unit (1 pc.)	95	85	70	0,16 kg	0,18 kg
	Carton (10 pcs.)	492	182	84	1,6 kg	2 kg
	Box (60 pcs.)	590	380	280	9,6 kg	12 kg