



# SPVL8-010-EP

EC fan controller with Modbus DCI output

The SPVL8-010-EP is a speed controller and monitoring device for Modbus RTU fans with DCI interface (EBM-Papst protocol). The Modbus RTU/DCI interface (DCI Gen. 1) is used to configure, control and monitor up to 20 fans. Fans featuring the EBM-Papst Modbus/DCI interface will be addressed automatically by the SPVL8-EP controller. This results in much faster commissioning.

## Key features

- Modbus RTU/DCI interface (daisy chain interface)
- Linear digital output signal according to the position of the potentiometer
- Automatic initial configuration of each fan
- Automatic assignment of network ID of each fan
- Control from low to high or from high to low speed, selectable via Modbus RTU holding registers
- Fan status monitoring via RGB LED and Modbus input registers
- OFF position
- Bootloader for updating the firmware via Modbus RTU
- Adjustable minimum (Vmin) and maximum (Vmax) output value via Modbus RTU holding registers
- Flush or surface mounting
- Push in terminal block
- Compatible with EBM-Papst K3G-series FFU with Modbus/DCI interface

## Technical specifications

Supply voltage	85—305 VAC / 50—60 Hz	
Output	Modbus/DCI	
Protection standard	Flush mounting	IP44 (according to EN 60529)
	Surface mounting	IP54 (according to EN 60529)
Ambient conditions	Temperature	0-40 °C
	Rel. humidity	5—95 % rH (non-condensing)

## Standards

- Low Voltage Directive 2014/35/EC
  - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendments AC:1993, A1:2000, A2:2013, AC:2016-12 and AC:2019-12 to EN 60529
  - EN 60730-1:2011 Automatic electrical controls for household and similar use. Part 1: General requirements
  - EN 60730-2-8:2002 Automatic electrical controls for household and similar use. Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements Amendment A1:2003 to EN 60730-2-8
  - EN 60730-2-9:2010 Automatic electrical controls for household and similar use. Part 2-9: Particular requirements for temperature sensing controls
- EMC Directive 2014/30/EC
  - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
  - EN 60730-2-8:2002 Automatic electrical controls for household and similar use - Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements Amendment A1:2003 to EN 60730-2-8
  - EN 60730-2-9:2010 Automatic electrical controls for household and similar use - Part 2-9: Particular requirements for temperature sensing controls
- RoHS Directive 2011/65/EU – Restriction of use of certain hazardous substances in electrical and electronic equipment
  - EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

## Area of use

- Speed control, monitoring and commissioning of EBM-Papst filter fan units (FFUs) with EC motor



## Wiring and connections



<b>L</b>	Power supply, line (85—305 VAC / 50—60 Hz)	
<b>N</b>	Power supply, neutral (85—305 VAC / 50—60 Hz)	
<b>8 - DCI</b>	Modbus DCI output	
<b>7 - GND</b>	Ground	
<b>6 and 2 - /B</b>	Modbus RTU (RS485), signal /B	
<b>5 and 4</b>	Do not connect	
<b>3 and 1 - A</b>	Modbus RTU (RS485), signal A	
<b>Connections</b>	Supply cables	Cable cross section: 0,5—1,5 mm <sup>2</sup>
	Modbus DCI communication / RS485 + DCI	Cat5 cable / UTP





# SPVL8-010-EP

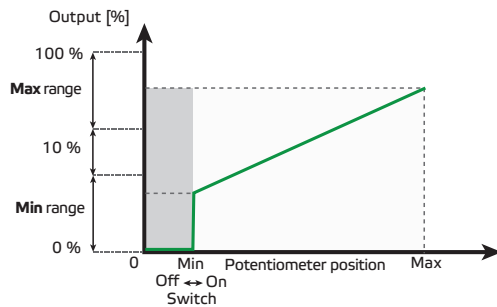
EC fan controller with Modbus DCI output

## LED indications

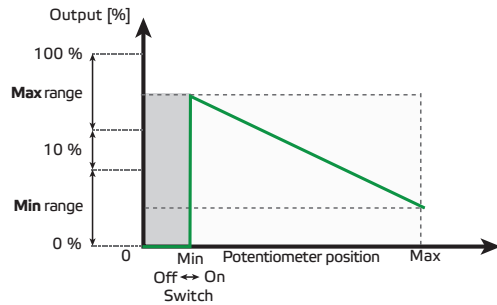
solid on	Installation OK
blinking	Configuration required
solid on	Single motor does not respond
blinking	Multiple motors do not respond
solid on	Single warning
blinking	Multiple warnings
solid on	Single error
blinking	Multiple errors

## Operational diagram

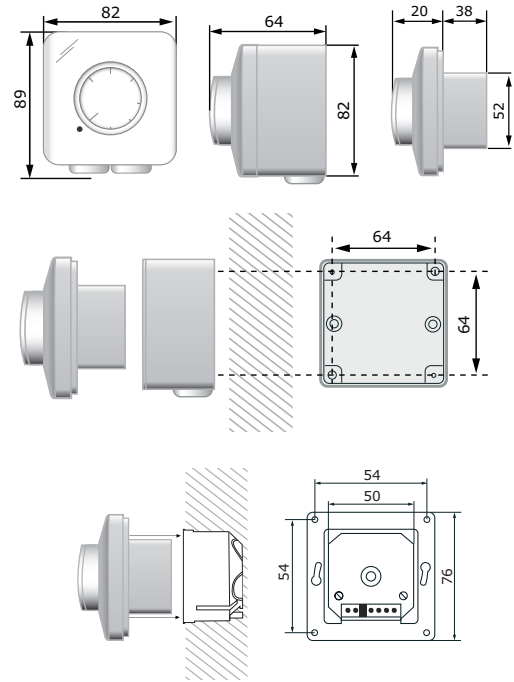
### From low to high speed



### From high to low speed



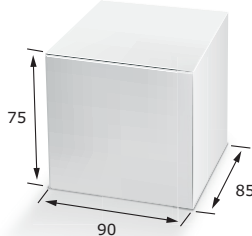
## Fixing and dimensions



## Global trade item numbers (GTIN)

Packaging	SPVL8-010-EP
Unit	05401003018798
Carton	05401003302910
Box	05401003504338
Pallet	05401003701423

## Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SPVL8-010-EP	Unit (1 pc.)	95	85	70	0,153 kg	0,174 kg
	Carton (10 pcs.)	492	182	84	1,53 kg	1,89 kg
	Box (60 pcs.)	590	380	280	9,18 kg	12,33 kg
	Pallet (1,680 pcs.)	1.200	800	2.180	257,04 kg	361,64 kg

## Connection

