

Self-adaptive
digital PID VAV controller
for VRP-M system solutions

- For pressure-independent VAV and CAV systems
- Control:
DC 0 ... 10 V / 2 ... 10 V or bus
- Diagnostics socket for VRP-M-Tool


Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz DC 24 V
	Power supply range	AC $\pm 20\%$ / DC $\pm 10\%$
	Power consumption	In operation 1.1 W (incl. VFP-.. sensor, without actuator) For wire sizing 2.6 VA (incl. VFP-.. sensor, without actuator)
	Connection	Actuator Plug, 6-pin Pressure sensor Plug, 4-pin Terminals 1 ... 7 Screw terminals, 7-pin, 0.5 mm ² ... 1.5 mm ² VRP-M-Tool Plug, 3-pin
Functional data	VAV reference signal w (terminal 3) Range: \dot{V}_{\min} ... \dot{V}_{\max}	Input impedance >200 k Ω – DC 0 ... 10 / 2 ... 10 V or – 0 ... 20 / 4 ... 20 mA (with 500 Ω resistance)
	Volumetric flow actual value U5 (terminal 5) Range 0 ... 100% \dot{V}_{nom}	DC 0 ... 10 / 2 ... 10 V, max. 5 mA
	OPEN operating step – z1 (terminal 6)	OPEN, input impedance >300 k Ω
	CAV operating steps z2 (terminal 7)	CLOSED / \dot{V}_{\min} / \dot{V}_{mid} / \dot{V}_{\max} , contact current <1 mA
	Control characteristics	PID, self-adaptive
	Control tolerance	$\pm 5\%$ of \dot{V}_{nom}
	Ranges	\dot{V}_{nom} Nominal volumetric flow (manufacturer-specific) \dot{V}_{\max} 30 ... 100% of \dot{V}_{nom} \dot{V}_{\min} * 0 ... 100% of \dot{V}_{\max} \dot{V}_{mid} (intermediate position) * 0 ... 100% of \dot{V}_{\min} ... \dot{V}_{\max}
	LED indicator	AC/DC 24 V supply Volume too high / too low, sensor zero
	MP-Bus function (terminal 4) *** Address in bus operation	MP 1 ... 8 (classic control: PP) Adjustable with VRP-M-Tool and address pushbutton
	Functionality Operation / service	Slave VRP-M-Tool
	Safety	Protection class
Degree of protection		IP42
EMC		CE according to 89/336/EEC
Mode of operation		Type 1 (to EN 60730-1)
Ambient temperature range		0 ... +50 °C
Non-operating temperature		–20 ... +80 °C
Ambient humidity range		5 ... 95% r.H., non-condensating (EN 60730-1)
Maintenance		Maintenance-free
Dimensions/weight	Dimensions	See «Dimensions» on page 25
	Weight	Approx. 250 g (without sensor)

* See «Creep flow limitation and minimum setting limit», page 9

** Not available with DC 24 V supply

*** For bus operation, see pages 16...18