

EXREG-V VOLUME FLOW / PRESSURE CONTROLLER

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

ATEX INSTRUMENTATION

ZONES 1, 2 (gas) & 21, 22 (dust)

Compact volume (air) flow controller ExReg-V.. for applications in hazardous locations in zone 1, 2, 21, 22 for control of air flows (CAV/VAV) in ventilation systems (HVAC). Suitable control actuator ExMax-..CY (without spring return) or ExMax-..CYF (with spring return, safety function) available.



VAV control must be tested by the manufacturer of VAV dampers in acc. with diameter, design and characteristics of the air damper.

- Can be configured on site in the hazardous location
- Fewer components
- No necessity to install safety barriers or to use special wiring
- Integral PID loop
- Also for mobile applications



EU-Type Examination Certificate

VOLUME FLOW / PRESSURE CONTROLLER EXREG-V.. FOR USE WITH EXMAX-.. ACTUATORS

Type:	Sensor:	Meas. range:	Connection / Interface (analogue):	Item No.:
ExReg-V100-A	Differential pressure	0...100 Pa	1 × actuator, 1 × set point, 1 × actual value, 1 × position actuator	9A1801
ExReg-V300-A	Differential pressure	0...300 Pa	1 × actuator, 1 × set point, 1 × actual value, 1 × position actuator	9A1802
ExReg-V1000-A	Differential pressure	0...1.000 Pa	1 × actuator, 1 × set point, 1 × actual value, 1 × position actuator	9A1803
ExReg-V100-B	Differential pressure	0...100 Pa	1 × actuator, RS485 communication	9A1804
ExReg-V300-B	Differential pressure	0...300 Pa	1 × actuator, RS485 communication	9A1805
ExReg-V1000-B	Differential pressure	0...1.000 Pa	1 × actuator, RS485 communication	9A1806

ACTUATORS FOR ..REG-V.. CONTROLLER

Type:	Torque:	Running time 90°:	Spring return:	Control mode:	Feedback:	Item No.:
ExMax- 5.10-CY	5 Nm / 10 Nm	7,5/15/30/60/120 seg.	-	4...20 mA	0...10 V	9A1807
ExMax- 15.30-CY	15 Nm / 30 Nm	7,5/15/30/60/120 seg.	-	4...20 mA	0...10 V	9A1808
ExMax- 5.10-CYF	5 Nm / 10 Nm	7,5/15/30/60/120 seg.	~ 10 sg	4...20 mA	0...10 V	9A1809
ExMax- 15- CFY	15 Nm	7,5/15/30/60/120 seg.	~ 10 sg	4...20 mA	0...10 V	9A1810

ACCESSORIES AND SPECIAL DESIGNS

Type:	Technical specifications:
MKR-VA/AL	Mounting bracket for installation on round air-ducts (diameter up to 600 mm)
Kit 2	Includes 2 meters pressure hose (inner diameter 6 mm) and 2 plastic fittings

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TECHNICAL SPECIFICATIONS

Marking:	 II 2(1)G Ex e mb [ia Ga] IIC T6 Gb  II 2(1)D Ex tb ib [ia Da] IIIC T80°C Db IP66
Certificate:	EU-Type Examination Certificate
Supply voltage / frequency:	24 VAC/DC $\pm$ 15% (20,4...27,6 VAC/DC), 50...60 Hz
Current power consumption:	150 mA, ~ 3 W, internal fuse 350 mA, without bracket, not removable
Galvanic isolation:	Supply to analogue inputs and outputs min. 1,5 kV, supply to relay output min. 1,5 kV
Electrical connection:	Terminals 0,14...2,5 mm ² in integrated Ex-e terminal box, wire stripping lenght 9 mm, tightening torque 0,4...0,5 Nm, equipotential bonding 4 mm ²
Display / Control elements:	LCD display backlit, for configuration, user guidance, parameter setting and actual value display. Status display via LEDs. / 3 buttons for configuration
Sensor / Sensor circuit:	Piezo measure transmitter / Internal intrinsically safe circuit
Housing:	Aluminium die-cast housing, coated
Ambient Temperature - Humidity:	-20...+50 °C (storage temperature -35...+70 °C) / 0...95 % rH, non condensing
Pressure connection:	P+ / P- sleeves $\varnothing$ 4...6 mm
Measuring range:	0...300 Pa, minimum measuring range is 2 % of full scale
Sensor damping (filter):	1...50 seconds, adjustable
Precision of pressure measurement:	$\pm$ 2,5 % full scale $\pm$ 1 Pa
Zero point setting:	Via menu. Both tube connections P+ / P- must be mechanically short-circuited for the time of zero point setting
Volume flow:	Calculation via k factor ("shield factor"); adjustable parameters: V _{max} , V _{min} , V _{Nom} , k-factor
Control:	Adaptative PID controller (automatic or manual mode selectable)
Control tolerance:	1...5 % adjustable
Delay time:	3 s
Alarm monitoring:	Volume flow monitoring; adjustable functions: tolerance limit (fixed value and variable value), alarm delay
Life time mechanically / electrically:	10x10 ⁶ / 100x10 ³
Dimensions:	180 × 107 × 66 mm
Weight:	~ 950 g
Cable entries:	2×M16, Ex-e plastic cable gland ~ $\varnothing$ 5...9 mm



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