

red-y smart pressure controller product information



Electronic pressure controller with integrated flow measurement



Pressure and flow in a single device:

Electronic pressure controller for gases with integrated flow measurement

The new electronic red-y smart pressure controllers combine the reliable technology our of thermal mass flow controllers with electronic pressure control.

The devices automatically control a predefined process pressure and at the same time measure and/or limit the flow rate.

On-the-fly switching between pressure control and flow control offers maximum flexibility.

1 device - 3 functions

The pressure controller combines three functions:

- Pressure controller
- Pressure controller with flow measurement/ limitation
- Flow controller with pressure measurement



Instrument versions

- Integrated pressure control Accuracy:± 0.5 % of full scale
- Integrated back pressure control Accuracy: ± 0.5 % of full scale
- Pressure control with external pressure transmitters
- Pressure controller with gas mixer function

It's a red-y smart

The pressure controllers combine the innovative equipment design of the red-y smart series with the development competence of Vögtlin Instruments AG.

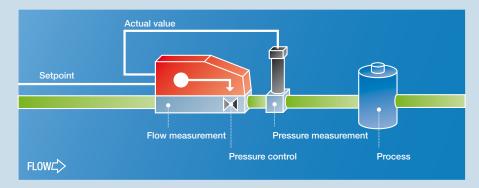
High-quality components ensure long and trouble-free operation.





Pressure control

In this application the electronic pressure controller regulates a digitally specified set pressure value. The flow rate depends on the process consumption. Maximum flow limitation enables pressure control of stable gas mixtures, for example.

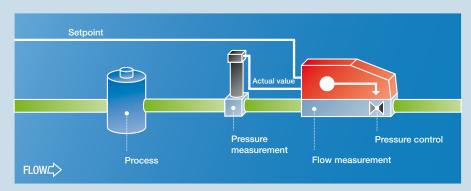


Application example:

Pressure control of a pressure vessel containing a stable gas mixture for laser gas or welding applications.

Back pressure control

In this configuration the effect of the control valve is reversed. The process generates a certain pressure, which must be readjusted.



Application example:

Overpressure control of a sterile chamber. The flow rate is used as a leakage indicator.

Wide range of accessories - ready for operation

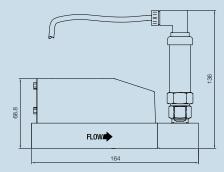
Connection cables, power supplies, software «get red-y»

Optimal range of cables and power supply units for fast integration of the pressure controllers. With the free software «get red-y» you can easily define functions and parameters.

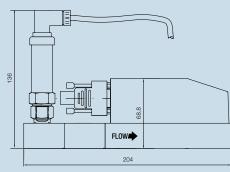
Fittings, filters

All flow meters and controllers are available with fittings and filters.

Dimensions G1/4" *



red-y smart pressure controller GSP



red-y smart back pressure controller GSB

^{*}Dimensions G1/2" on request

Technical Data red-y smart pressure controller

Instrument types red-y smart pressure controller GSP red-y smart back pressure controller GSB Electronic pressure controller Electronic back pressure controller Pressure controller with external transmitter and customer-specific solutions on request Instrument versions flow Standard - The economic solution ± 1.0 % of full scale Accuracy: Turndown ratio: 1:50 'Hi-Performance' – With highest accuracy and turndown ratio \pm 0.3 % of full scale + \pm 0.5% of reading Accuracy: Turndown ratio: 1:100 for GSM < 200 ln/min / GSC < 150 ln/min (air) Instrument versions pressure Pressure control Accuracy: ± 0.5 % of full scale Back pressure control Accuracy: ± 0.5 % of full scale Differential pressure controller according to customer specifications Measuring ranges flow (Air) Full scale freely selectable Measuring range (Air) Connection Type pressure controller GSP GSX-A from 0 ... 25 mln/min to 0 ... 600 mln/min G1/4" back pressure controller GSB G1/4" GSX-B from 0 ... 600 mln/min to 0 ... 6000 mln/min GSX-C G1/4" from 0 ... 6 ln/min to 0 ... 60 ln/min GSX-D from 0 ... 60 ln/min to 0 ... 450 ln/min G1/2" Other ranges on request Measuring ranges pressure Full scale gauge pressure 0.5 bar g, 1 bar g, 2 bar g, 5 bar g, 10 bar g 1.2 bar a, 2 bar a, 5 bar a, 10 bar a Full scale absolute pressure Air, O2, N2, He, Ar, CO2, H2, CH4, C3H8 Performance data Media (real gas calibration) Other gases and gas mixtures on request Response time 50 ms Repeatability ± 0.2% of full scale Longterm stability < 1% of measured value / year Power supply 24 Vdc (18 - 30 Vdc), 15 Vdc on request Current consumption max. 250mA **Temperature** (environment/gas) 0-50°C Materials Anodized aluminium, optional stainless steel electropolished FKM, optional EPDM Seals Pressure sensitivity < 0.2% / bar of reading (typical N2) Temperature sensitivity < 0.025% FS measuring range type / °C Integration Output signals 0..20 mA, 4..20 mA, 0..5 V, 1..5 V, 0..10 V, 2..10 V analog (for actual value flow only) digital RS-485; Modbus RTU (Slave); Lab View-VI's available Option: ProfiBus DP-V0, DP-V1 (for pressure and flow) **Process connection** G¼" female less than 60 ln/min, G½" female less than 450 ln/min Inlet section None required Sub D plug, 9 pole Electrical connection Mounting orientation Any orientation (horizontal only above 5 bar) Safety 16 bar a Test pressure Leak rate $< 1 \times 10^{-6}$ mbar I/s He

Environmental protection

EMC

IP-50

EN 61326-1

Type code (red-y smart pressure controller)

Instrument type	red-y smart series (Gas)	S									
Function	Pressure controller		Р								
	Back pressure controller		В								
	With external pressure transmitter		K								
Full scale of measuring range (Air)	25 mln/min (G¼", 25 x 25mm)			Α	1						
	50 mln/min			Α	2						
	100 mln/min			Α	3						
	200 mln/min			Α	4						
	500 mln/min			Α	5						
	Customer-specific (Divider A, up to 600mln/min)			Α	9						
	500 mln/min (G1/4", 25 x 25mm)			В	2						
	1000 mln/min			В	3						
	2000 mln/min			В	4						
	5000 mln/min			В	5						
	Customer-specific (Divider B, up to 6'000mln/min)			В	9						
				С	2						
	5 In/min (G½", 25 x 25mm)										
	10 ln/min			С	3						
	20 In/min			С	4						
	50 In/min			С	5						
	Customer-specific (Divider C, up to 60 In/min)			С	9						
	50 In/min (G½", 35 x 35mm)			D	2						
	100 In/min			D	3						
	200 ln/min			D	4						
	450 In/min			D	5						
	Customer-specific (Divider D, up to 450ln/min)			D	9						
Instruments version	Standard (±1.0% full sciale, 1 : 50)					s					
	Hi-Performance (±0.3% full scale, ±0.5% reading, 1:100)					Т					
	Customer-specific / OEM					K					
Materials (Body, seals)	Aluminium, FKM**						Α				
	Aluminium, EPDM						В				
	Stainless steel, FKM						s				
	Stainless steel, EPDM						Т				
	Customer-specific / OEM						K				
Analog signals (Output)	Current 420 mA**							В			
	Current 020 mA							С			
	Voltage 05 V							D			
	Voltage 15 V							E			
	Voltage 010 V							F			
	Voltage 210 V							G			
	Customer-specific / OEM							K			
Full scale of pressure range	Gauge pressure 0.5 bar g								Q		
	Gauge pressure 1 bar g								R		
	Gauge pressure 2 bar g								S		
	Gauge pressure 5 bar g								Т		
	Gauge pressure 10 bar g								U		
	Absolute pressure 1.2 bar a								V		
	Absolute pressure 2 bar a								W		
	Absolute pressure 5 bar a								Х		
	Absolute pressure 10 bar a								Υ		
	Customer-specific / OEM								K		
Control valve (integrated)	N 1 04									2	1
defined by many factures	Nozzle 0.1 mm									2	2
defined by manufacturer	Nozzle 0.1 mm Nozzle 0.2 mm									2	3
delined by manufacturer											J
delined by mandiacturer	Nozzle 0.2 mm									2	6
deimed by mandiacturer	Nozzle 0.2 mm Nozzle 0.5 mm										
ueimea by mandiacturer	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm									2	6 2
deimed by mandfacturer	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm Nozzle 8.0 mm									2 1 1	6 2 3
deimed by mandiacturer	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm Nozzle 8.0 mm Valve not defined									2 1 1 8	6 2 3 8
denned by mandfacturer	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm Nozzle 8.0 mm Valve not defined Valve mounted									2 1 1 8 9	6 2 3 8 5
Genned by mandfacturer	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm Nozzle 8.0 mm Valve not defined Valve mounted Customer-specific / OEM									2 1 1 8 9	6 2 3 8 5 9
Type code	Nozzle 0.2 mm Nozzle 0.5 mm Nozzle 1.2 mm Nozzle 4.5 mm Nozzle 8.0 mm Valve not defined Valve mounted	a S								2 1 1 8 9	6 2 3 8 5

flow technology by vögtlin

Do you have any questions about our products? Give us a call:

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