Date created, 12/01/2017 - Subject to change. Belimo Aircontrols (USA), Inc.

P2125S-211, 1-1/4", Electronic Pressure Independent Valve Stainless Steel Ball and Stem, Female NPT Ends







	WAR
cal Data	
е	chilled or hot water, up to 60% glycol r (open loop/steam not allowed)

Service chilled or hot water, up to 60% glycol max (open loop/steam not allowed) Flow Characteristic equal percentage or linear Size [mm] 1.25" [32] End Fitting NPT female ends Body forged brass, nickel plated Sensor Housing forged brass, nickel plated Sensor Housing stainless steel Stem stainless steel Stem stainless steel Seat Teflon® PTFE Seat O-ring EPDM Characterized Disc TEFZEL® or stainless steel Body Pressure Rating [psi] 360 Media Temperature Range (Water) Differential Pressure Range 5 to 50 psid, 1 to 50 psid (with flow reduction. See chart.), or 8 to 50 psid (with flow increase. See chart.) Close-Off Pressure 200 psi Inlet Length to Meet Specified Measurement Accuracy Ambient Humidity <95% RH non-condensing Flow Measurement Tolerance ±2%* Flow Control Tolerance ±5% Flow Gontrol Tolerance ±5% Flow Measurement Repeatability ±0.5% Sensor Technology ultrasonic with glycol and temperature compensation Rangeability 100:1 Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg] GPM 21.1	Technical Data	
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Water) Differential Pressure Range Differential Pressure Range S to 50 psid, 1 to 50 psid (with flow reduction. See chart.), or 8 to 50 psid (with flow increase. See chart.) Close-Off Pressure 200 psi Inlet Length to Meet Specified Measurement Accuracy Ambient Humidity Sepson Technology Ambient Repeatability Sensor Technology With flow Measurement Tolerance #5% Flow Measurement Repeatability #20.5% Sensor Technology Ultrasonic with glycol and temperature compensation Rangeability Power Supply for the Flow Sensor Weight S to 50 psid (with flow reduction. See chart.) #200 psi SX nominal pipe size (NPS) SX nominal pipe size (NPS) SX nominal pipe size (NPS) Weight	Body Pressure Rating [psi]	360
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Flow Measurement Repeatability ±0.5% Sensor Technology ultrasonic with glycol and temperature compensation Rangeability 100:1 Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg]		
Sensor Technology ultrasonic with glycol and temperature compensation Rangeability 100:1 Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg]	Flow Control Tolerance	±5%
Sensor Technology ultrasonic with glycol and temperature compensation Rangeability 100:1 Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg]	Flow Measurement Repeatability	±0.5%
compensation Rangeability 100:1 Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg]		ultrasonic with glycol and temperature
Power Supply for the Flow Sensor sensor is powered by the actuator Weight 6.2 lb [2.8 kg]	concer recurrency,	
Weight 6.2 lb [2.8 kg]	Rangeability	100:1
	Power Supply for the Flow Sensor	sensor is powered by the actuator
GPM 21.1	Weight	6.2 lb [2.8 kg]
	GPM	21.1
Leakage 0%	Leakage	0%

^{*}All flow tolerances are at 68°F (20°C) & water.

Application

Water-side control of heating and cooling systems for AHUs and water coils. Equal Percentage/ Linear: heating and cooling applications.

Operation

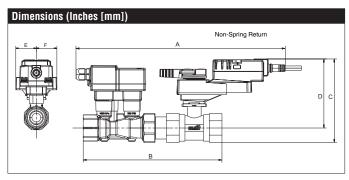
The Electronic Pressure Independent Control Valve is a two-way valve that maintains constant flow regardless of pressure variations in the system.

Product Features

Provides constant flow regardless of pressure variations in the system. $\label{eq:maximizes} \mbox{ Maximizes chiller P, preventing energizing additional chillers due to low \ T.}$ Simplified valve sizing and selection, no Cv calculations required.

Suitable Actuators

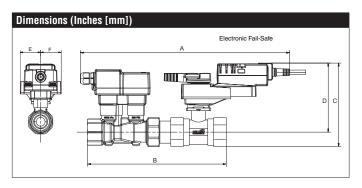
Gartabio Motaatoro				
	Non-Spring	Electronic Fail-Safe		
P2125S-211	NR	AKRX		



Α	В	С	D	Е	F
16.37"	10" [254]	6.08" [154]	5.16" [131]	1.73" [44]	
[416]					



P2125S-211, 1-1/4", Electronic Pressure Independent Valve Stainless Steel Ball and Stem, Female NPT Ends



Α	В	С	D	E	F
17.9" [454]	10" [254]	8.18" [208]	7.29" [185]	1.89	" [48]

NRX24-EP-MOD





24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
4.5 W
7 VA (class 2 power source)
3ft [1m], 18 GA plenum cable with 1/2" conduit connector
electronic thoughout 0° to 90° rotation
2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor)
100 kΩ (0.1 mA), 500 Ω
2 to 10 VDC
90°
Min. 90 in-lbs [10 Nm]
reversible with pc tool
integrated into handle
external push button
5 to 95% RH non condensing (EN 60730-1)
-22°F to 122°F [-30°C to 50°C]
-40°F to 176°F [-40°C to 80°C]
NEMA 2, IP54
UL94-5VA
cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
max. 35 dB (A)
maintenance free
ISO 9001
1.5 lb [0.7 kg]
IP54

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3





Wiring Diagrams



X INSTALLATION NOTES



Provide overload protection and disconnect as required.



Actuators may be connected in parallel. Power consumption and input impedance must be observed.



Actuators may also be powered by 24 VDC.



Actuators are provided with color coded wires. Wire numbers are provided for reference.



Actuators are provided with a numbered screw terminal strip instead of



IN4004 or IN4007 diode required

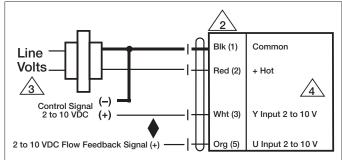


Meets cULus requirements without the need of an electrical ground connection.

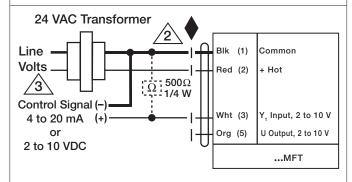


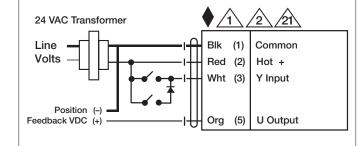
WARNING! LIVE ELECTRICAL COMPONENTS!

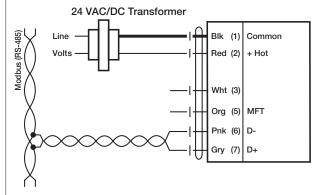
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



24 VAC/DC Transformer







Modbus control for Non-Spring Return

Note:

Modbus signal assignment:

 $C_1 = D_2 = A$

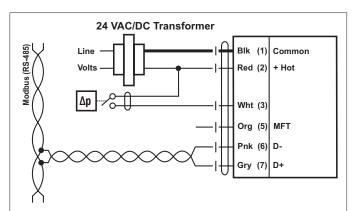
 $C_2 = D + = B$

Power supply and communication are not

galvanically isolated.

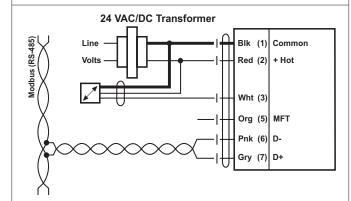
Interconnect ground signal of the devices.





Modbus control with switching contact for Non-Spring Return Requirements for switching contact:

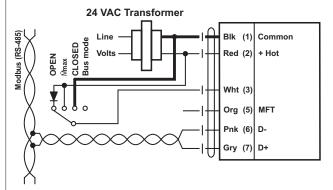
The switching contact must be able to accurately switch a current of 16 mA at $24\,\text{V}$.



Modbus control with active sensor for Non-Spring Return

Possible input voltage range:

0...32 V (resolution 30 mV)



Modbus control with local override (AC only, analogue override) for Non-Spring Return

Note

If no sensor is integrated, then connection 3 (Y) is available for the protective circuit of a local override control. Options: CLOSED, Vmax, OPEN