

Type 3700

Proportional Pressure Regulator

Features

- LED display for monitoring output pressure
- Fast response
- High flow rate
- Output pressure is maintained in the event of power loss
- IP65 class protection
- Compact and lightweight
- Suitable for standalone and modular mounting
- Straight and right angle cable options available

Applications

- Tension control applications
- Glue proportioning
- Spot welding
- Control of speed, force, and torque
- Zero weighing balancer
- Position control
- Fluid coating and many more!



Experience precision and efficiency with the Type 3700 Proportional Pressure Regulator. It features an LED display for easy output pressure monitoring and offers fast response times for optimal performance. With a high flow rate, it ensures seamless operation and maintains output pressure even during power loss. The IP65 class protection ensures durability in various environments. Its compact and lightweight design allows for effortless installation, whether standalone or modular. Say goodbye to complexities in tension control, glue proportioning, spot welding, speed and force control, zero weighing balancing, position control, fluid coating, and more. Achieve consistent and precise results, enhancing the efficiency and reliability of your processes.

Technical Specifications

Model		3704...	3703...	3702...
Port size	IN & OUT	1/2 NPT	3/8 NPT	1/4 NPT
	EXH	1/2 NPT	1/4 NPT	
Medium		Compressed air, Filtered*		
Minimum supply pressure in psi (bar)		Regulated pressure + 7.25 (+ 0.5)		Regulated pressure + 14.5 (1)
Maximum supply pressure in psi (bar)		152.3(10.5)	101.5(7)	51(3.5) 29(2)
Regulating pressure range in psi (bar)		1-145 (0.07 - 10)	1-87 (0.07 - 6)	0.7-36.3 (0.05 - 2.5) 0.7-14.5 (0.05 - 1)
Minimum output pressure span in psi (bar)		7(0.05)		7.3(0.05)
Power Supply	Voltage	24V DC $\pm 10\%$		
	Power consumption	3Watts		
	Current consumption	0.125A at 24V DC		
Command Input	Potentiometer (only in voltage analog input model)	Analog Input through potentiometer (Load Impedance >10K Ω)		
	Keyboard	Input through keys		
	Analog input	Voltage	0-10V (Load impedance 10 k Ω)	
		Current	0-5V (Load impedance 10 k Ω) 4-20mA (Load impedance < 270 Ω)	
Monitoring Output	Analog output	Voltage	1 - 5V DC (output impedance 10 k Ω), output accuracy $\pm 3\%$ of full span [®]	
		Current	0 - 10V DC (output impedance 10 k Ω), output accuracy $\pm 3\%$ of full span [®]	
			4 - 20mA DC (output impedance 250 Ω), output accuracy $\pm 3\%$ of full span [®]	
Linearity		$\pm 1\%$ of full span or less		
Hysteresis		0.5% of full span or less		
Repeatability		$\pm 0.5\%$ of full span or less		
Sensitivity		0.2% of full span or less		
Output Pressure Display	Accuracy	$\pm 2\%$ of F.S. ± 1 Digit or less		
	Minimum Unit	87, 145 psi ranges: 1 psi (.07 bar), 36.3, 14.5 psi ranges: .1 psi (.007 bar)		
Flow rate in scfm (lpm)		247.2 (7000) [®]		79.5 (2250) [®]
Ambient / Medium temperature		32° - 122° F (0° to 50° C)		
Materials of construction		Aluminum, Brass, SS, Nitrile, PET, ABS, FR4		
Enclosure (Class protection)		IP 65		
Weight in lb (kg)		1.65 (0.750)		1.23 (0.560)

* Use a filter (40 micron) and a coalescent filter (0.1 micron) in addition at the inlet. Flow may vary based on the filter and coalescent filter.

[®] Supply pressure 15 2.3 psi (10.5 bar), Set pressure 6 bar, Pressure drop $\Delta p = 14.5$ psi (1 bar)
(For 14.5 psi pressure range).

Ordering Matrix

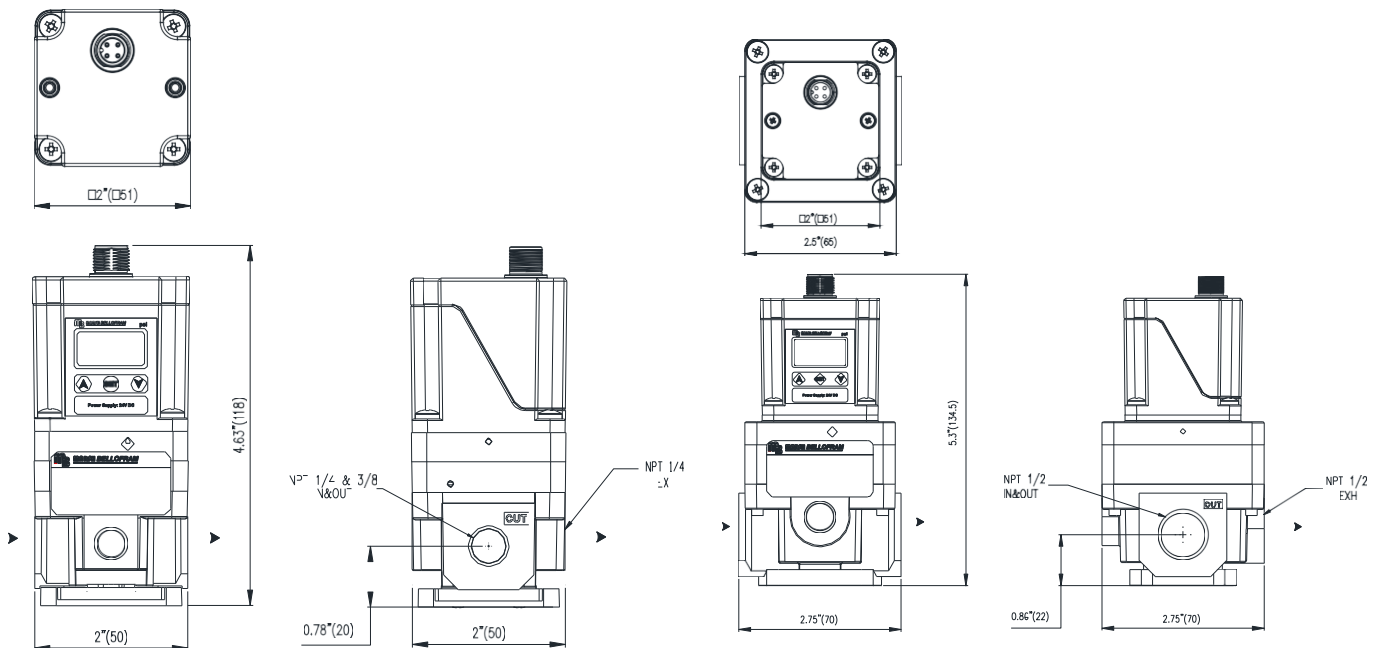
		37	XX	XXX	XXX	XX	XX
Port Size							
1/4" NPT	02						
3/8" NPT *	03						
1/2" NPT	04						
Output Ranges							
0.7-15 psi	015						
0.7-36 psi	036						
0.7-87 Psi	087						
0.7-145 Psi	145						
Input Signal							
0-5 VDC *	E05						
0-10 VDC	E10						
4-20 mA	I20						
Output Signal							
1-5 VDC *	05						
0-10 VDC	10						
4-20 mA	20						
Electrical Connector							
4-pin M12 male connector	00						

Accessories

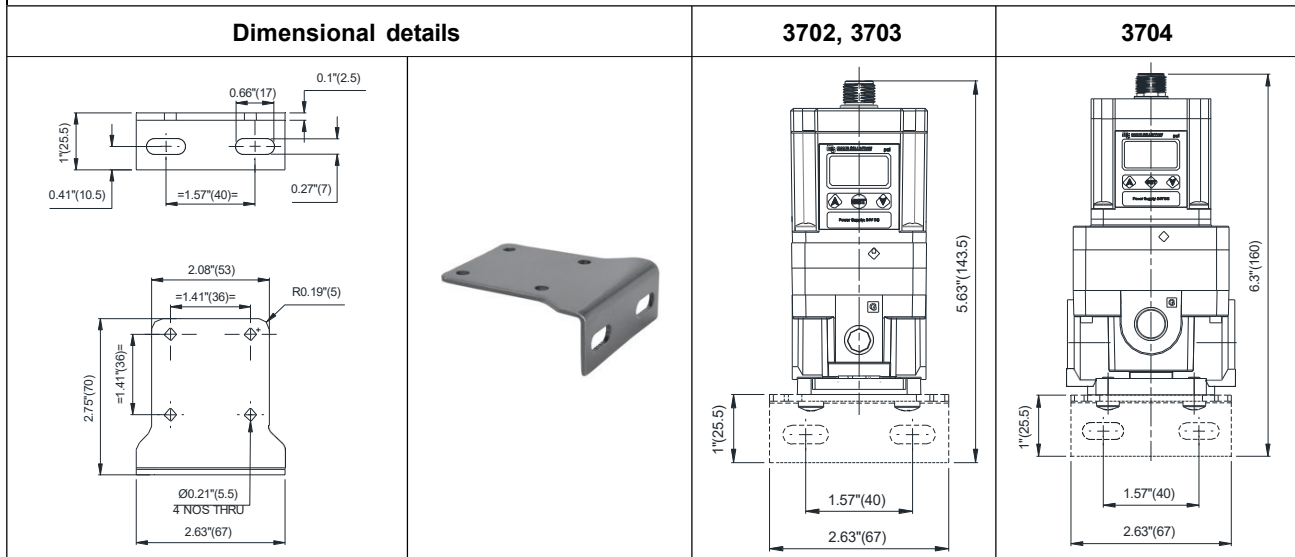
L-Clamp	181-370-00
Foot Bracket	181-370-01
2 meter straight cable	122-042-00
2 meter right angle cable	122-042-01
5 meter straight cable	122-043-00
5 meter right angle cable	122-043-01

* Special order only

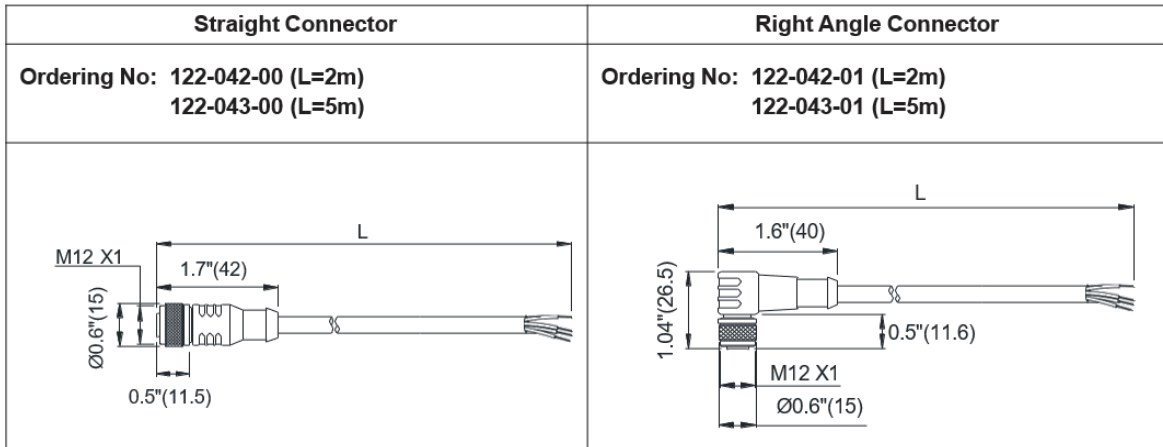
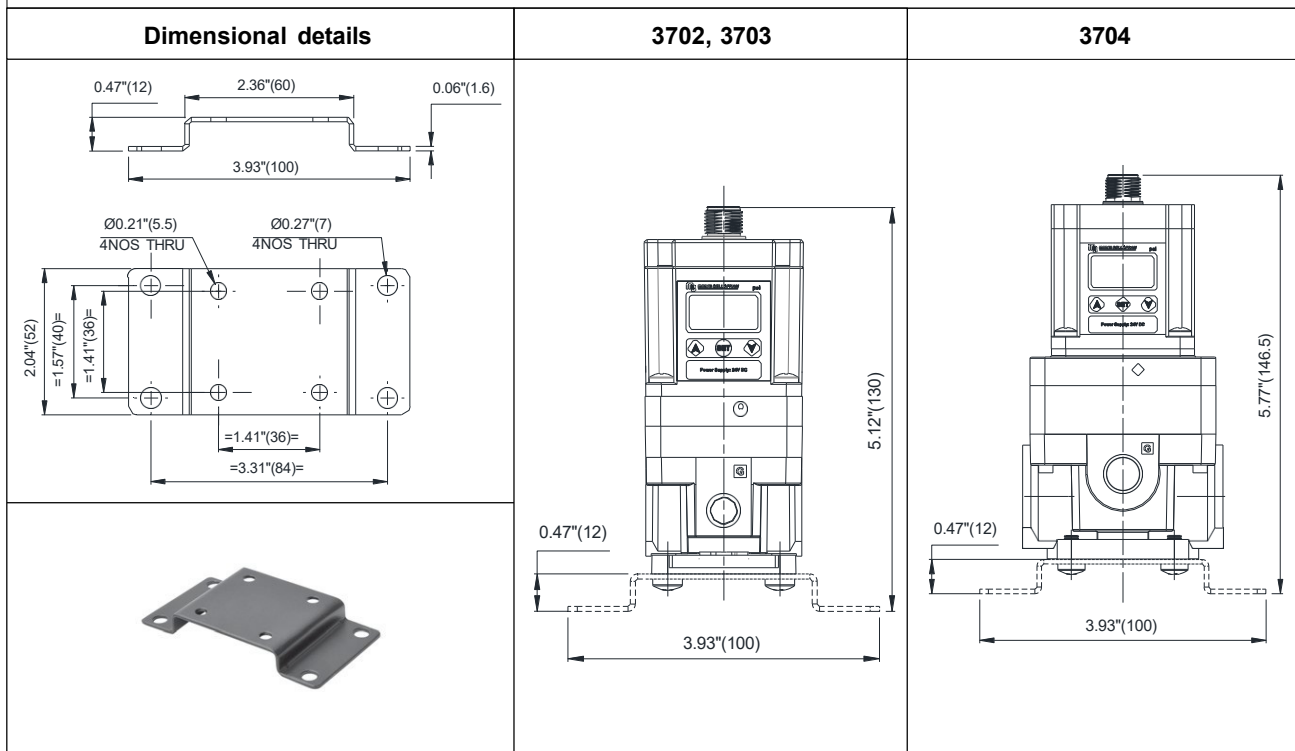
Drawings



L - Clamp (Ordering No :181-370-00)

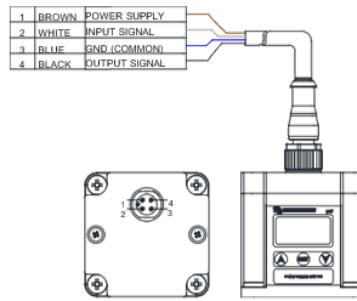


Foot bracket (Ordering No : 181-370-01)

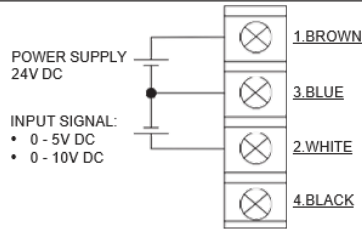


Electrical connection details

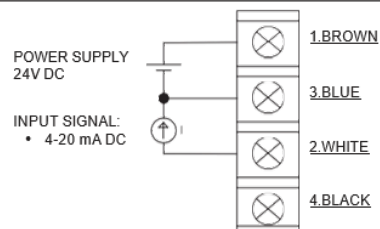
CONNECTION DIAGRAM



Command input - Analog - Voltage

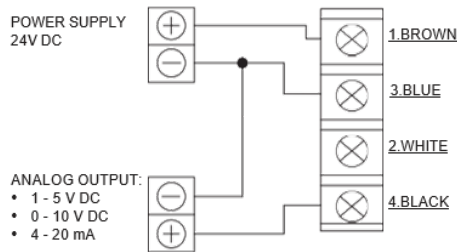


Command input - Analog - Current

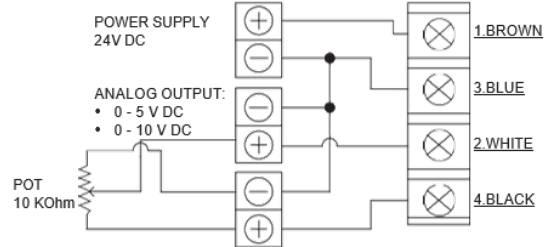


Electrical Connection details

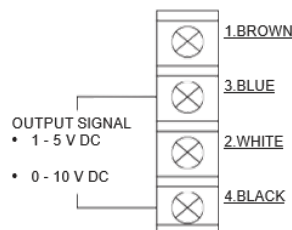
Command input - Keyboard mode



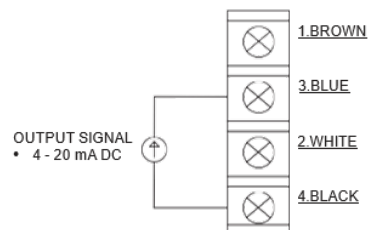
Command input - Potentiometer mode



Monitoring output - Analog - Voltage

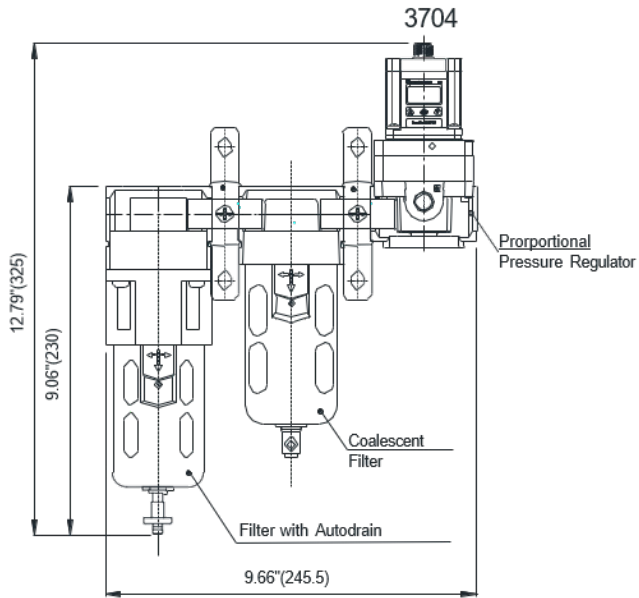


Monitoring output - Analog - Current

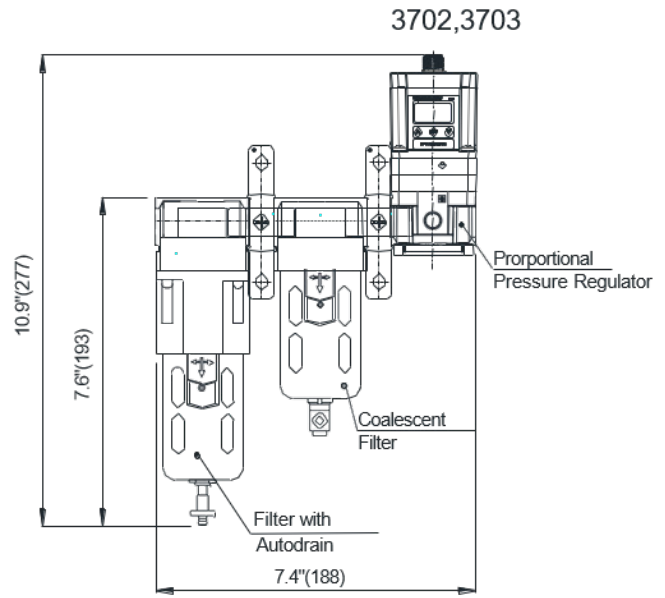


Note: Above wire colors are based on the M12 cable which is supplied by MB.

Recommended Modular Mounting and Products



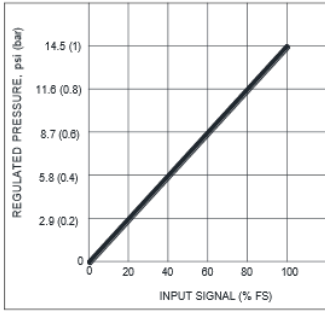
Sl. No	Product name	Part no	Qty
1	Filter with auto drain	MA15F4NCA	1
2	Coalescent Filter	MA15CF4NVM	1



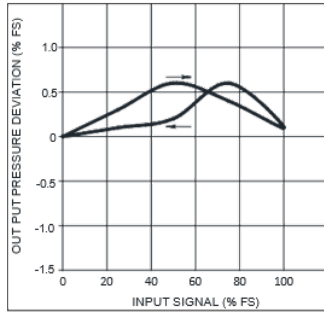
Sl. No	Product name	Part no	Qty
1	Filter with auto drain	MA14F3NCA	1
2	Coalescent Filter	MA14CF3NVM	1

3704.... (1/2 NPT), 14.5 psi (1 bar)

Linearity

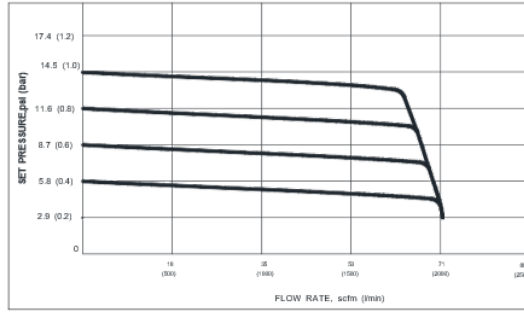


Hysteresis

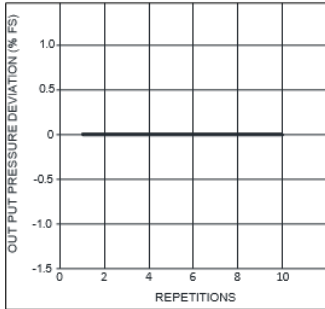


Flow

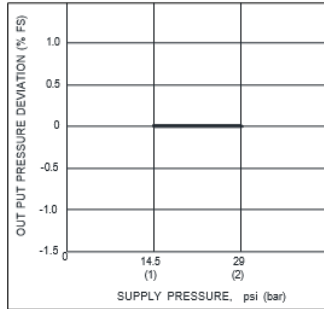
Supply Pressure: 29 psi (2 bar)



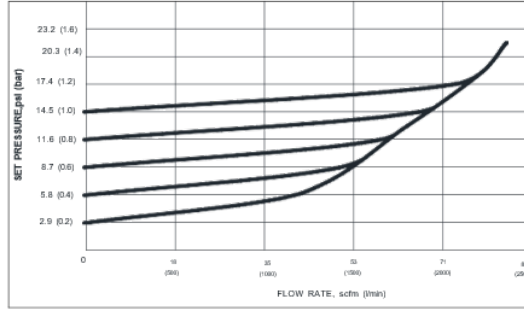
Repeatability



Pressure Characteristics

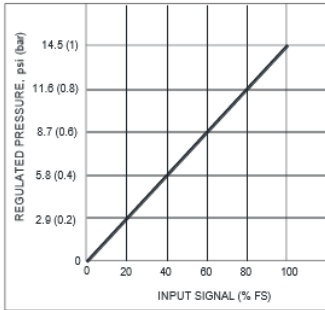


Relief Flow

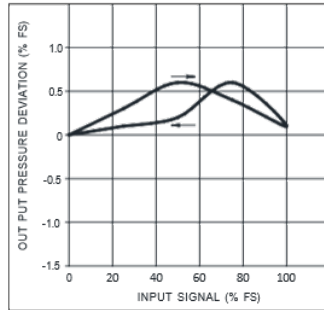


3702.... & 3703.... (1/4 NPT & 3/8 NPT), 14.5 psi (1 bar)

Linearity

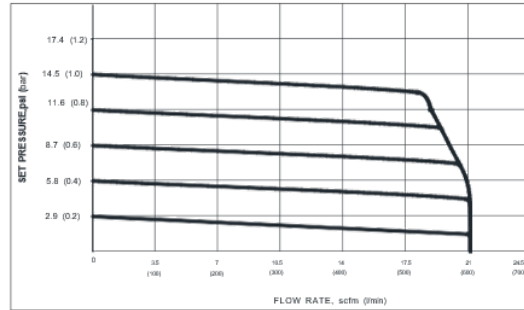


Hysteresis

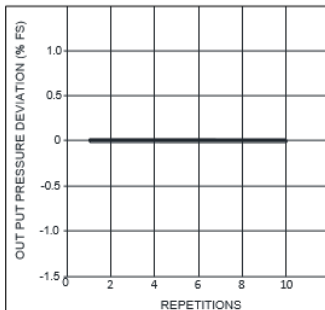


Flow

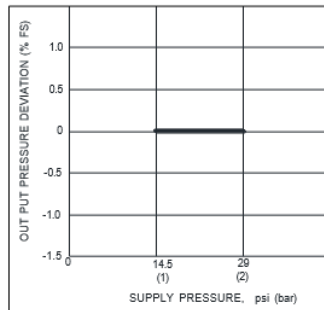
Supply Pressure: 29 psi (2 bar)



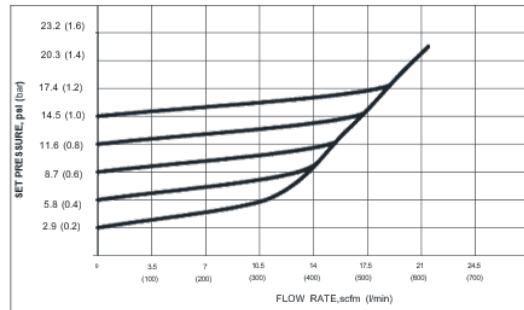
Repeatability



Pressure Characteristics

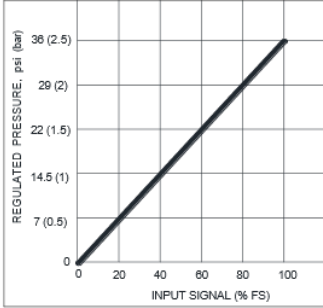


Relief Flow

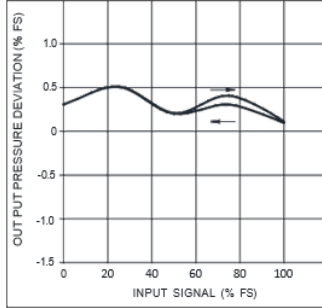


3704.... (1/2 NPT), 36 psi (2.5 bar)

Linearity

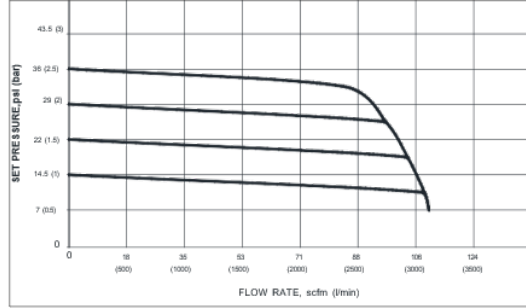


Hysteresis

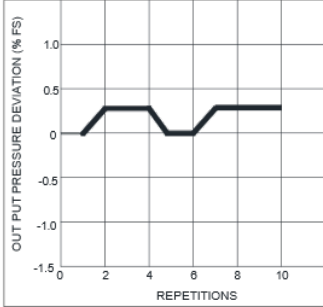


Flow

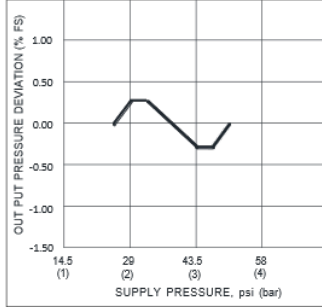
Supply Pressure: 50.8 psi (3.5 bar)



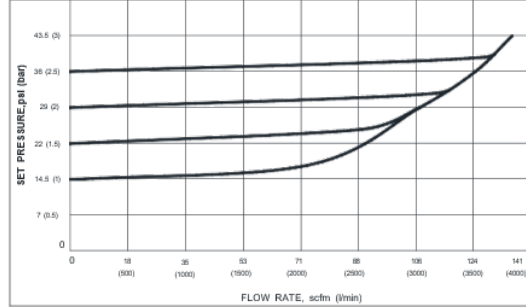
Repeatability



Pressure Characteristics

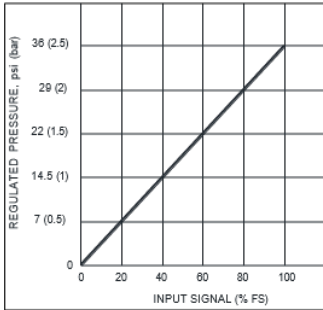


Relief Flow

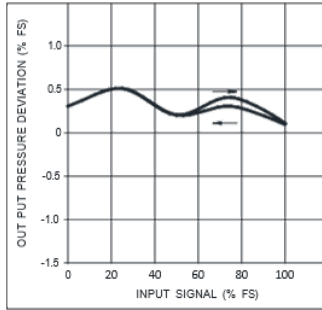


3702.... & 3703.... (1/4 NPT & 3/8 NPT), 36 psi (2.5 bar)

Linearity

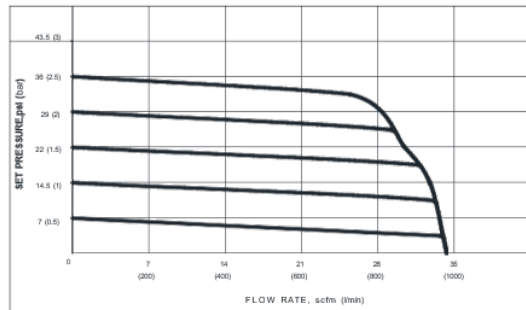


Hysteresis

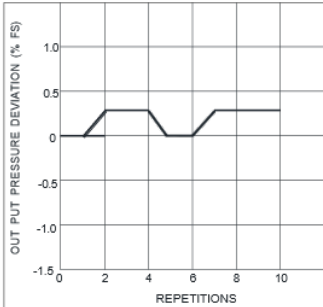


Flow

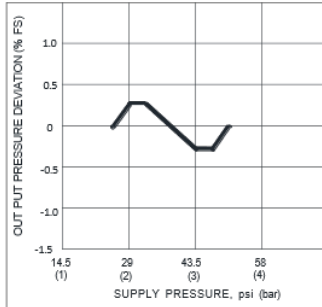
Supply Pressure: 50.8 psi (3.5 bar)



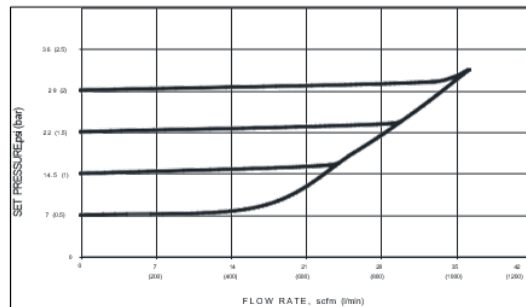
Repeatability



Pressure Characteristics

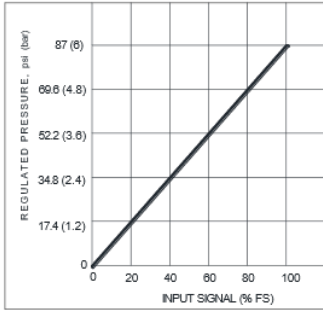


Relief Flow

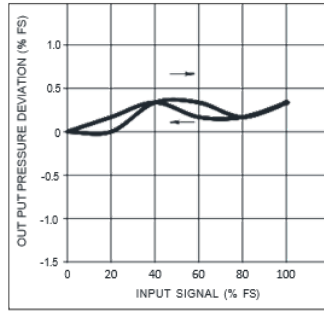


3704.... (1/2 NPT), 87 psi (6 bar)

Linearity

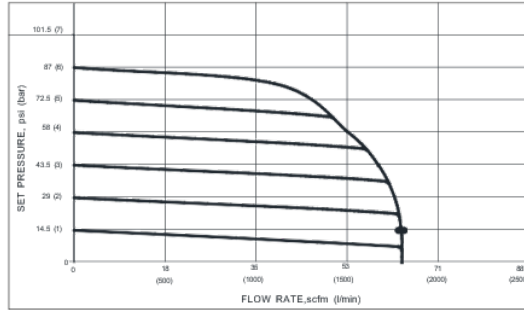


Hysteresis

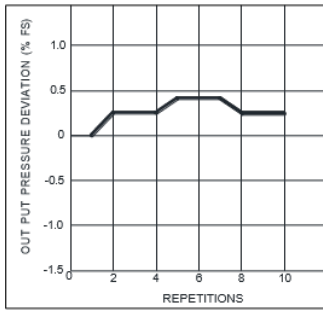


Flow

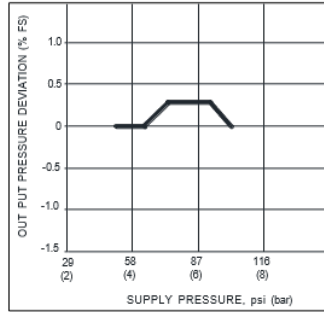
Supply Pressure: 101.5 psi (7 bar)



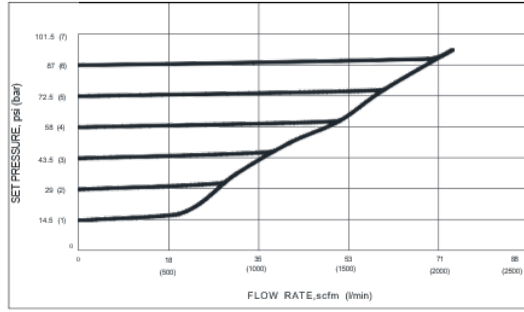
Repeatability



Pressure Characteristics

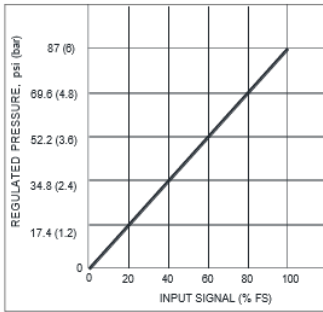


Relief Flow

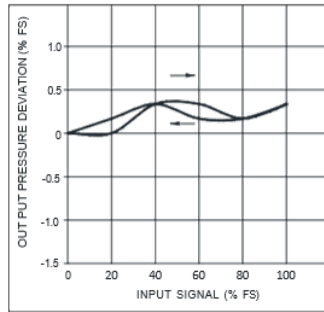


3702.... & 3703.... (1/4 NPT & 3/8 NPT), 87 psi (6 bar)

Linearity

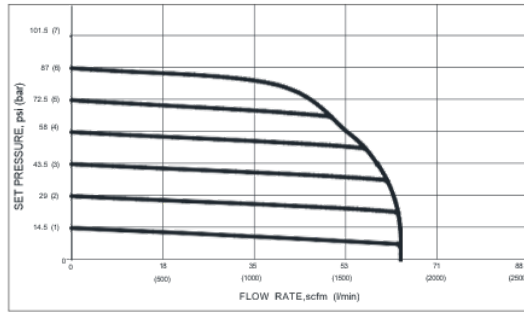


Hysteresis

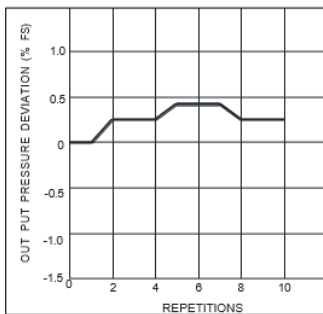


Flow

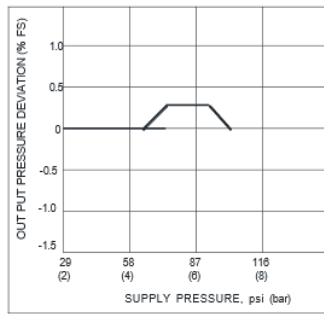
Supply Pressure: 101.5 psi (7 bar)



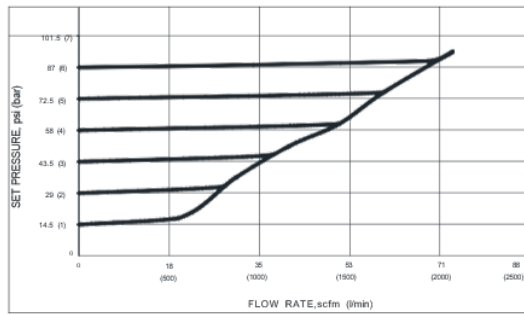
Repeatability



Pressure Characteristics

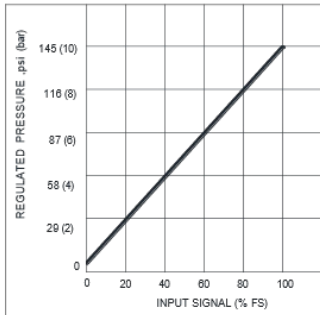


Relief Flow

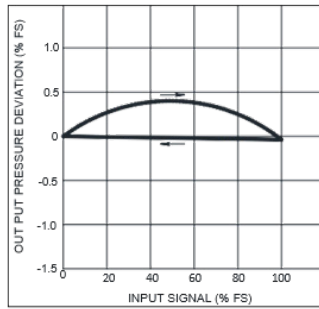


3704.... (1/2 NPT), 145 psi (10 bar)

Linearity

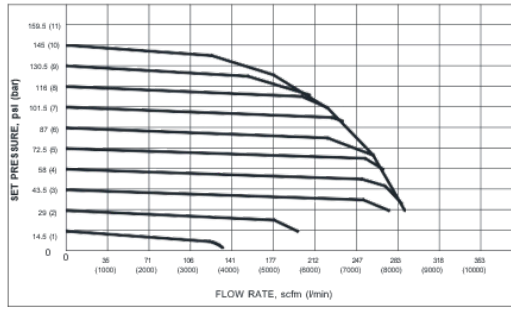


Hysteresis

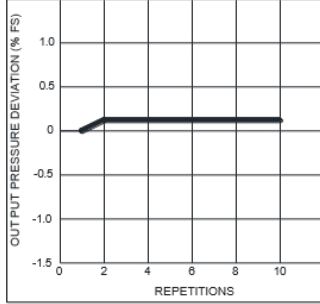


Flow

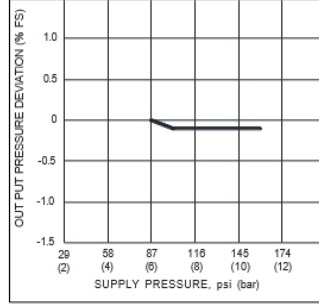
Supply Pressure: 152.3 psi (10.5 bar)



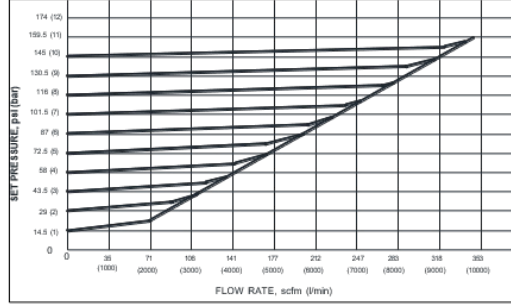
Repeatability



Pressure Characteristics

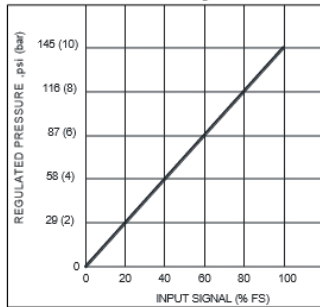


Relief Flow

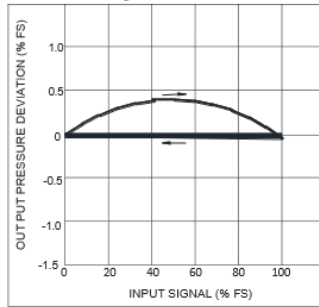


3702.... & 3703.... (1/4 NPT & 3/8 NPT), 145 psi (10 bar)

Linearity

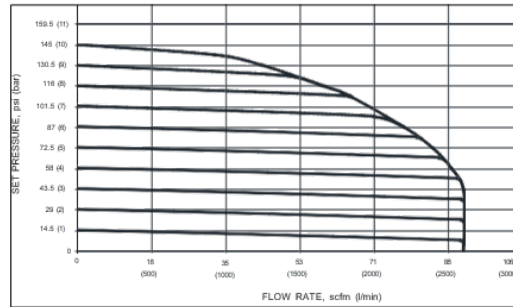


Hysteresis

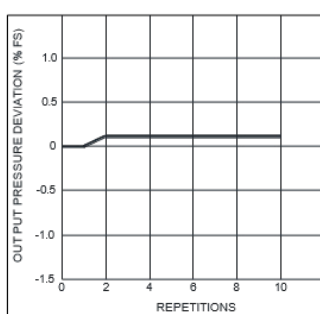


Flow

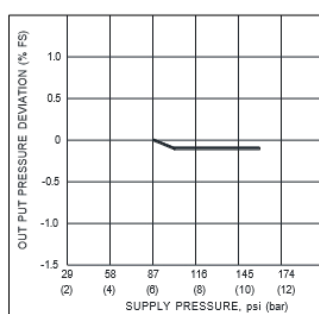
Supply Pressure: 152.3 psi (10.5 bar)



Repeatability



Pressure Characteristics



Relief Flow

