

# 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		1/2 NPT	3/8 NPT	1/4 NPT
Medium		Compressed air, Filtered #		
Minimum supply pressure in psi (bar)		Regulated pressure +7 to 14.5 (+ 0.5 to 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)		0.7-145 (0.05 - 10) (Standard)	0.7-87 (0.05 - 6)	0.7-36.(0.05 - 2.5) 0.7-14.5 (0.05 - 1)
Power Supply	Voltage	24V DC $\pm 10\%$		
	Power consumption	3Watts		
	Current consumption	0.125A at 24V DC		
Command Signal	Potentiometer mode (only in voltage analog input model)		Analog Input through potentiometer (Load Impedance >10K $\Omega$ )	
	Keyboard mode		Input through keys	
	Analog input	Voltage	0-10V (Load impedance 10 k $\Omega$ )	
		0-5V (Load impedance 10 k $\Omega$ )		
Current		4-20mA (Load impedance < 270 $\Omega$ )		
Monitoring output	Analog output	Voltage	0.2 - 4.7V DC (output impedance 10 k $\Omega$ ), output accuracy $\pm 3\%$ of full span	
			1 - 5V DC (output impedance 10 k $\Omega$ ), output accuracy $\pm 3\%$ of full span	
		Current	0 - 10V DC (output impedance 10 k $\Omega$ ), output accuracy $\pm 3\%$ of full span	
		4 - 20mA DC (output impedance 250 $\Omega$ ), 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. $\pm 1$ Digit or less		
	Minimum Unit	0.01 bar, 1 psi, 0.01 kgf/cm <sup>2</sup>		
Flow rate in scfm (Ltrs/min)		247.2 (7000)		79.5 (2250)
Ambient / Medium temperature		32° - 122° F (0° to 50° C)		
Materials of construction		Aluminium, Brass, SS, Nitrile, PET, ABS, FR4		
Enclosure (Class protection)		IP 65		
Weight in lb (kg)		1.65 (0.750)		1.23 (0.560)

@ Supply pressure 152 psi (10.5 bar), Set pressure 87 psi (6 bar), Pressure drop  $\Delta p = 14.5$  psi (1bar) (For standard models).

# Use a Filter (5 micron) and a Mist separator (0.01 micron) at the inlet.

**Ordering Matrix**

		37	XX	XXX	XXX	XX	XX
<b>Port Size</b>							
1/4" NPT	02						
3/8" NPT *	03						
1/2" NPT	04						
<b>Output Ranges</b>							
0.7-15 psi	015						
0.7-36 psi	036						
0.7-87 Psi	087						
0.7-145 Psi	145						
<b>Input Signal</b>							
0-5 VDC *	E05						
0-10 VDC	E10						
4-20 mA	I20						
<b>Output Signal</b>							
1-5 VDC *	05						
0-10 VDC	10						
4-20 mA	20						
<b>PVC Cable</b>							
No Cable	00						
2 meter straight	2S						
2 meter right angle	2A						
5 meter straight	5S						
5 meter right angle	5A						

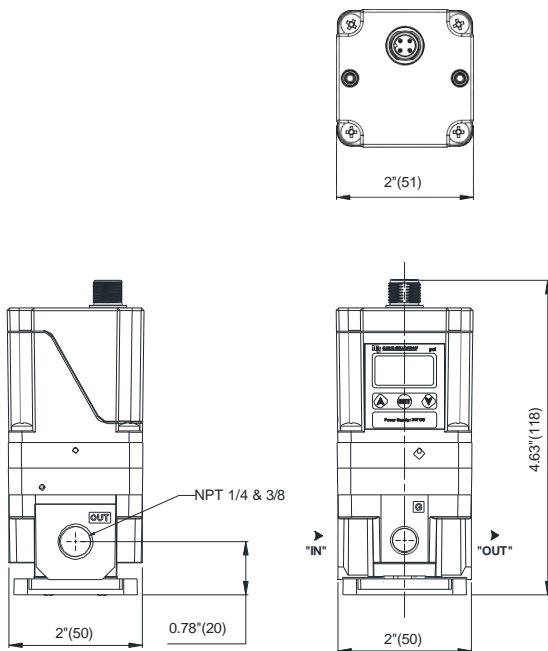
**Accessories**

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

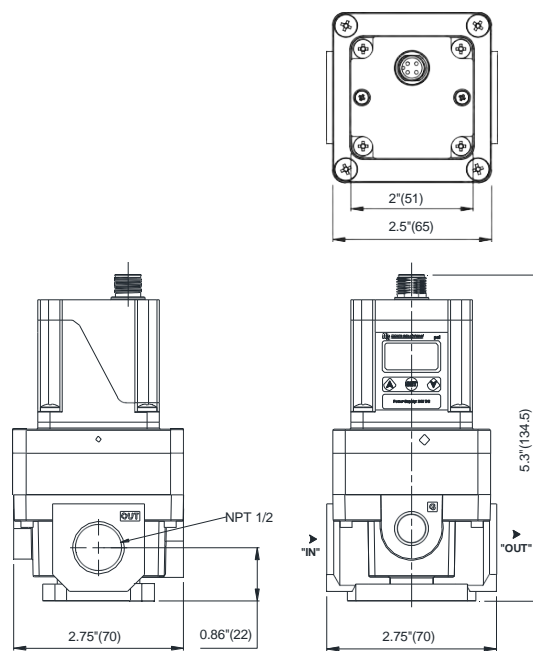
\* Special order only

**Drawings**

**Model 3702, 3703**

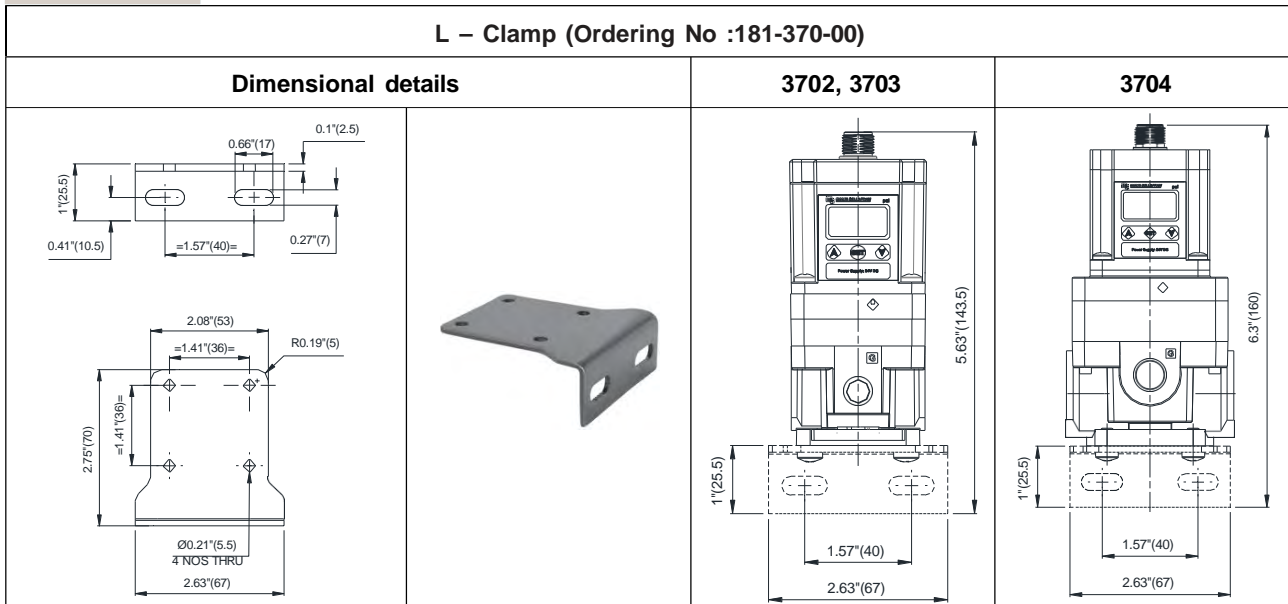


**Model 3704**

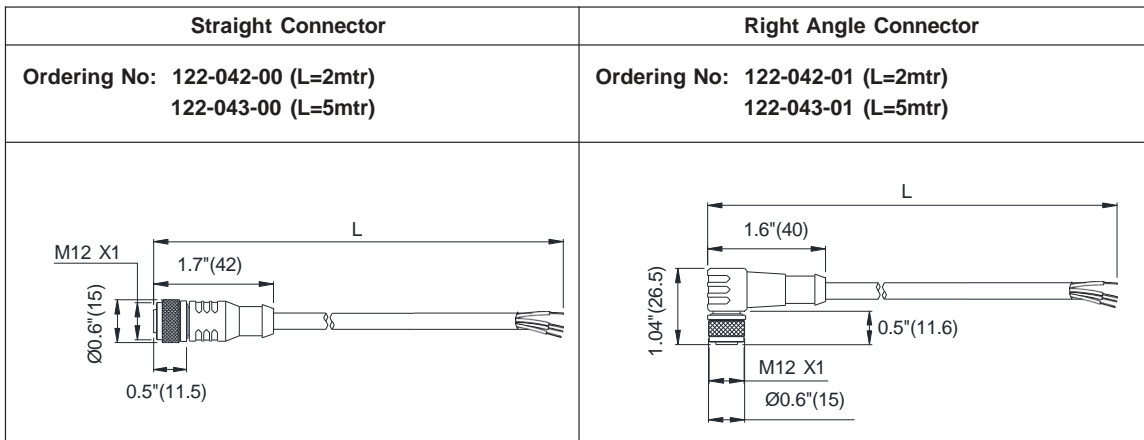
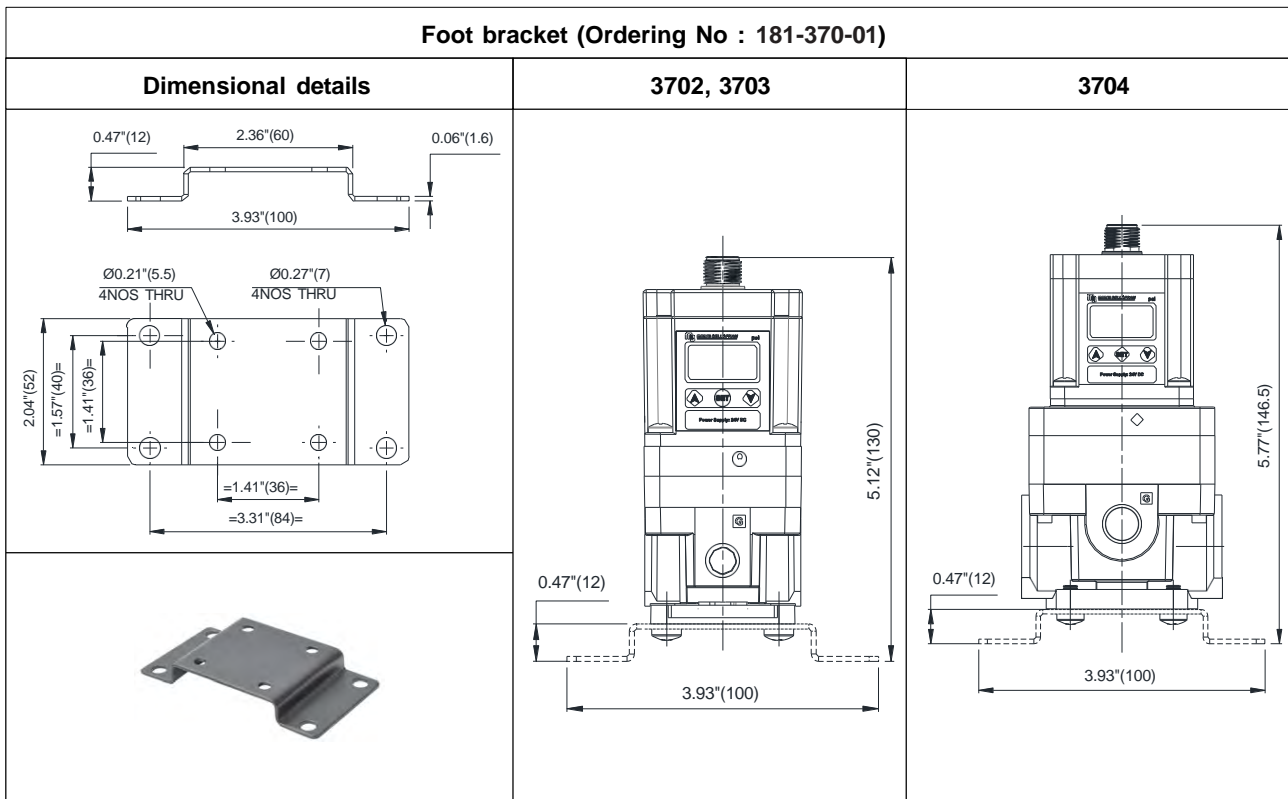


**Accessories**

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



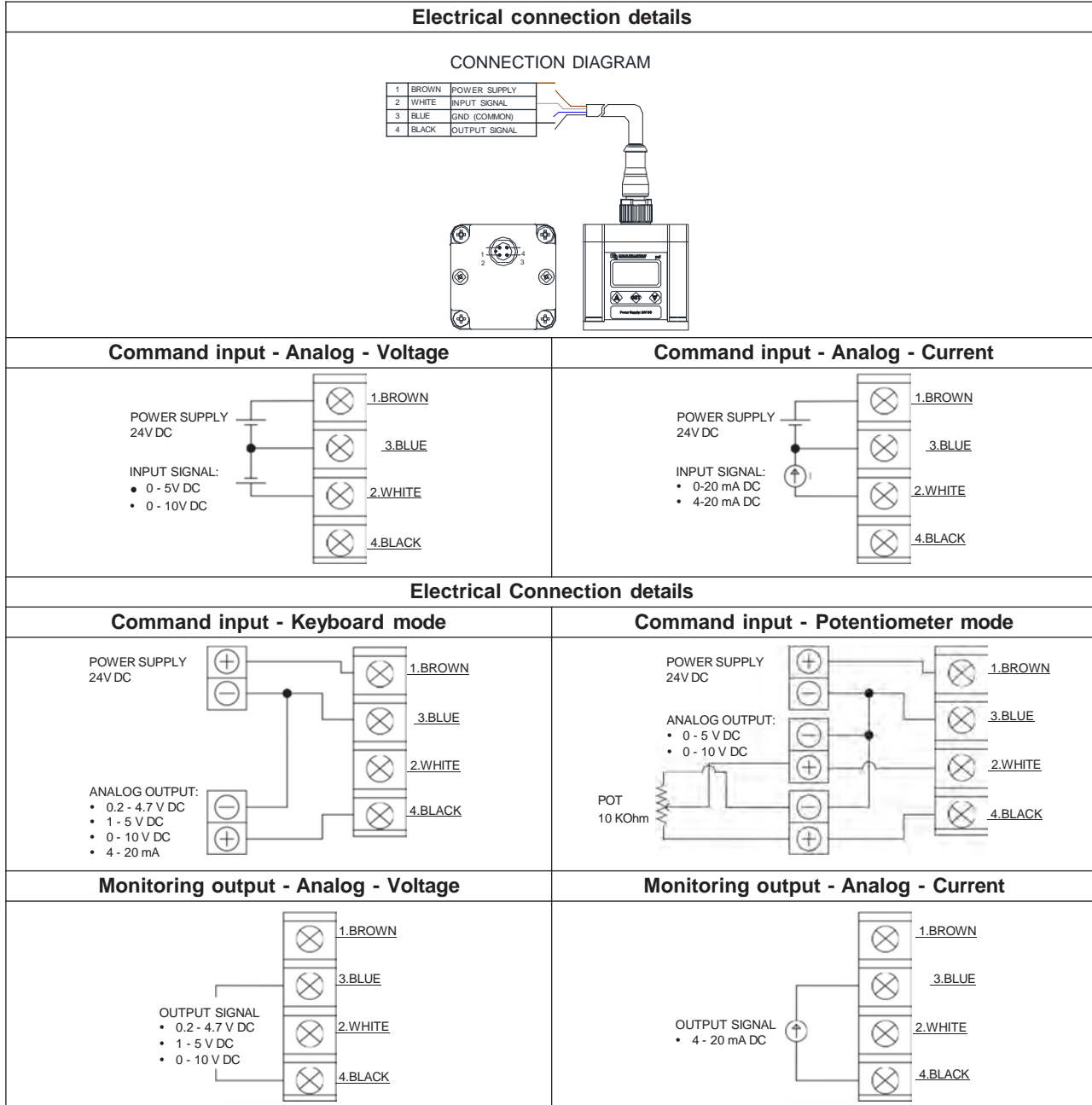
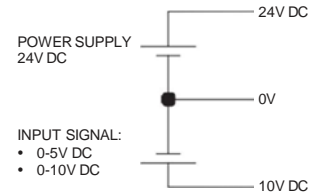
**Foot bracket (Ordering No : 181-370-01)**



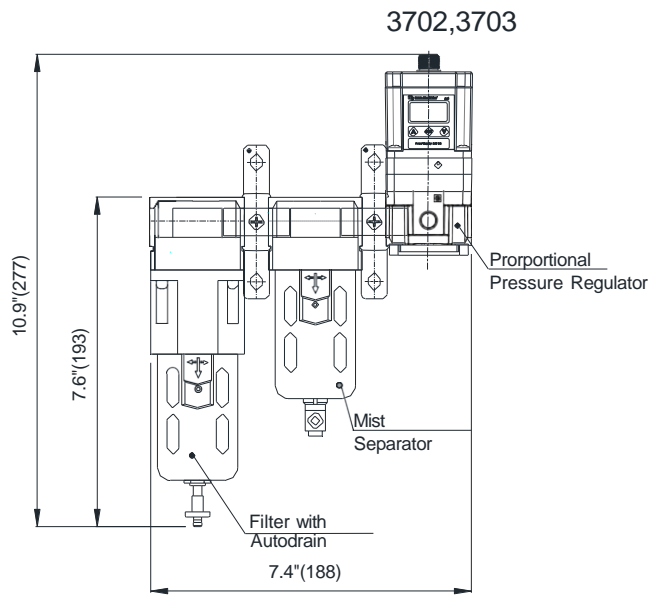
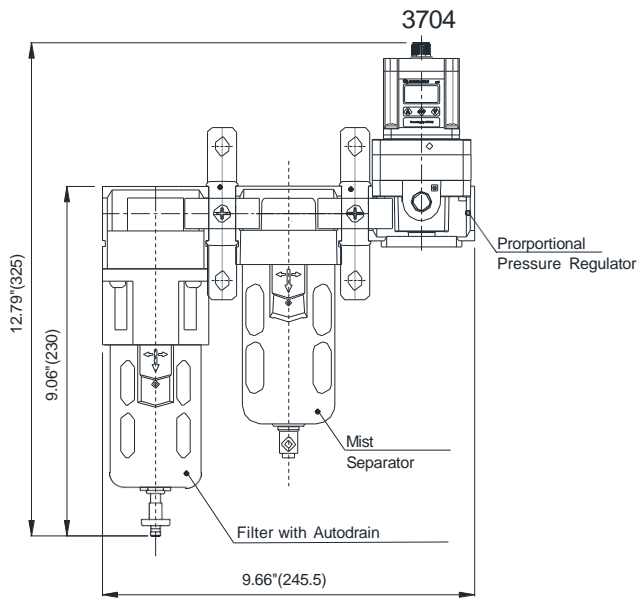
## Electrical wiring



1. Operate this product only within the specified voltage (24V DC  $\pm$ 10%). Using voltages beyond the specified levels could cause faults or malfunctions
2. Use DC power supply with sufficient capacity with low ripple. Turn off the power supply when inserting and removing the connector
3. The electrical connection information in the manual must be observed; otherwise, electrical protection may be affected
4. Use 0 V as the baseline for the power supplied to the unit for output, control and input
5. Connect the cable to the connector on the product as per below wiring. Connect the cable carefully, as incorrect wiring can cause damage



**Recommended Modular Mounting and Products**



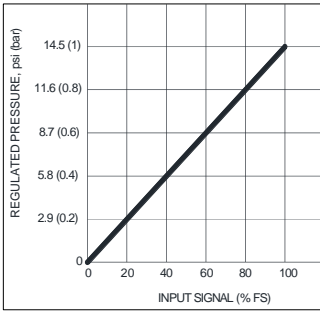
SI. No	Product name	Part no	Qty
1	Filter with auto drain	MA15F4NCA	1
2	Mist separator	MA15CF4NVM	1

SI. No	Product name	Part no	Qty
1	Filter with auto drain	MA14F3NCA	1
2	Mist separator	MA14CF3NVM	1

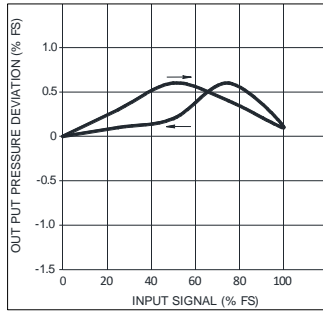
**Air Preparation Units**

**3704 (1/2" NPT), 0.7-15 psi (1 bar)**

**Linearity**

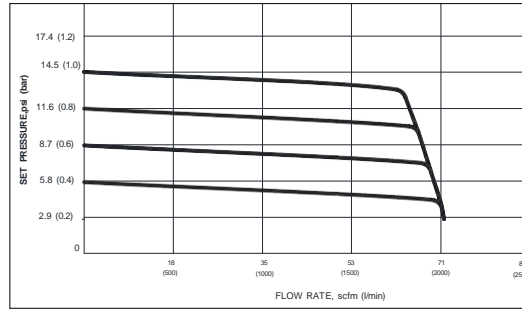


**Hysteresis**

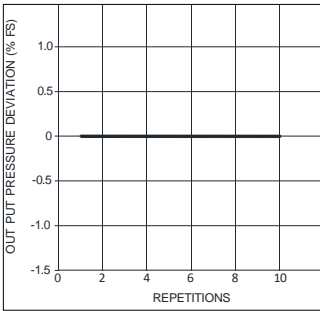


**Flow**

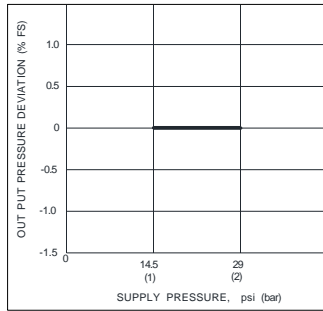
Supply Pressure: 29 psi (2 bar)



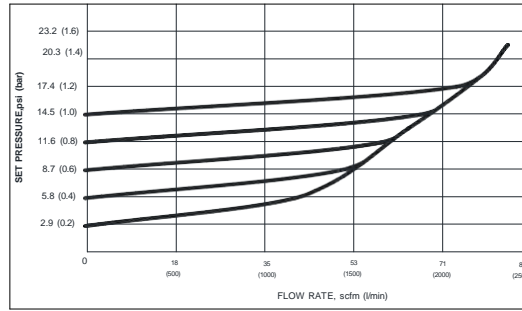
**Repeatability**



**Pressure Characteristics**

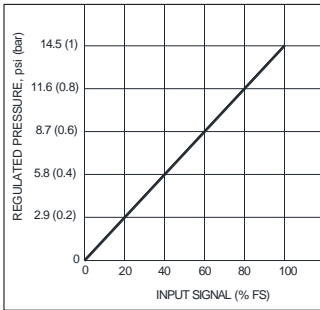


**Relief Flow**

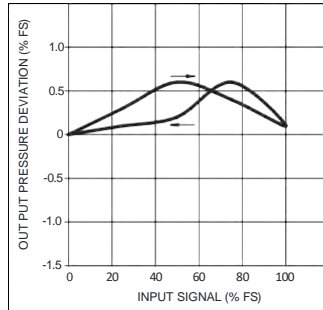


**3702 & 3703 (1/4" NPT & 3/8" NPT), 0.7-15 psi (1 bar)**

**Linearity**

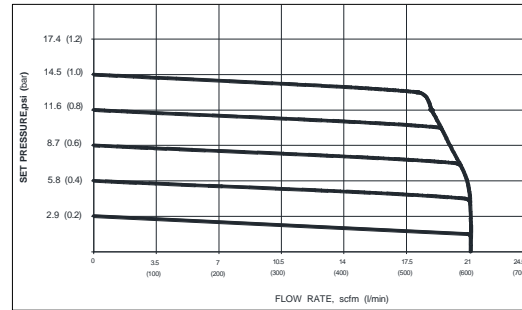


**Hysteresis**

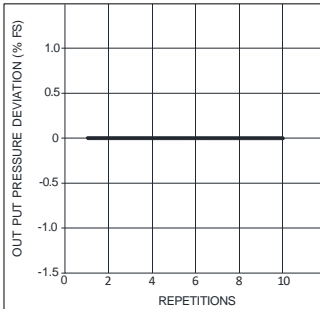


**Flow**

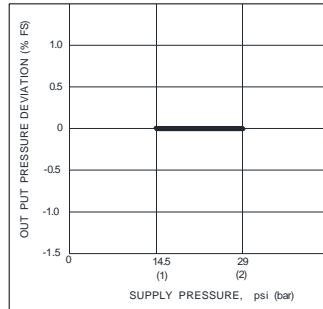
Supply Pressure: 29 psi (2 bar)



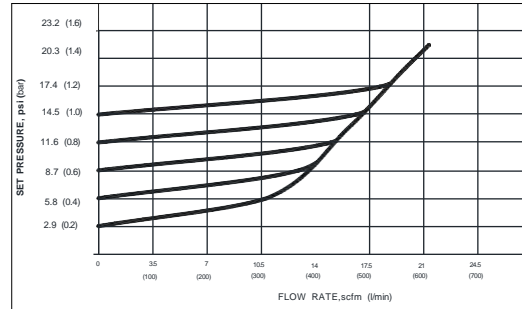
**Repeatability**



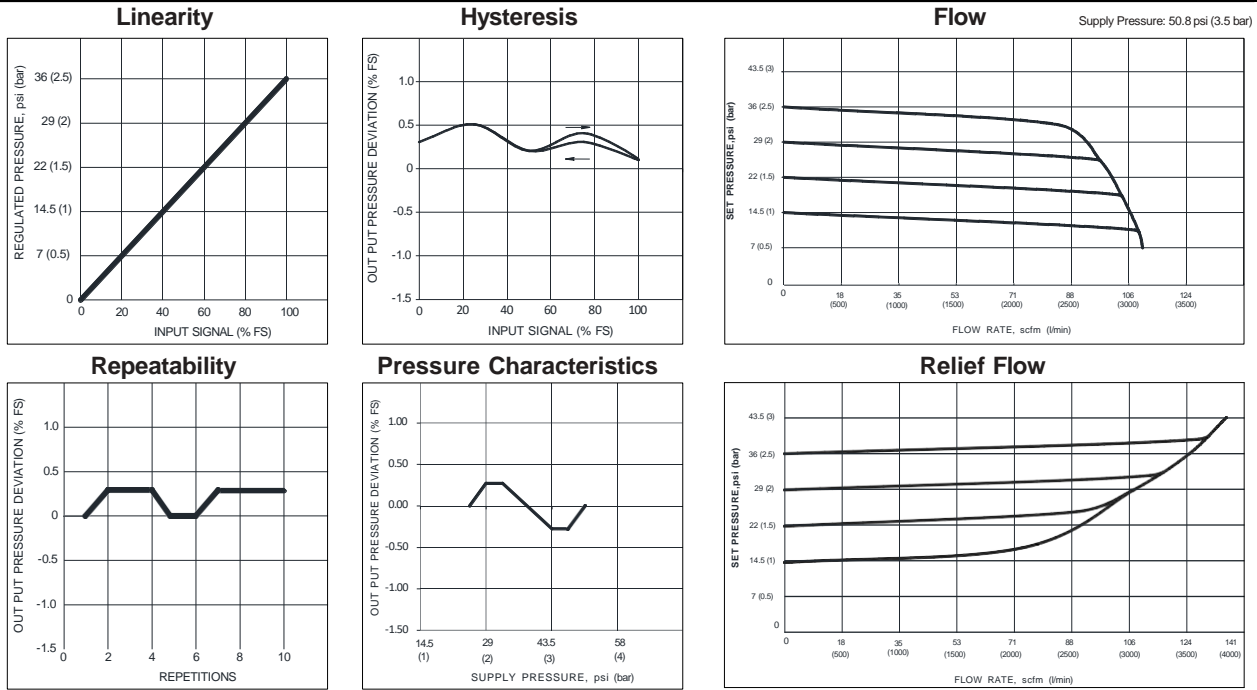
**Pressure Characteristics**



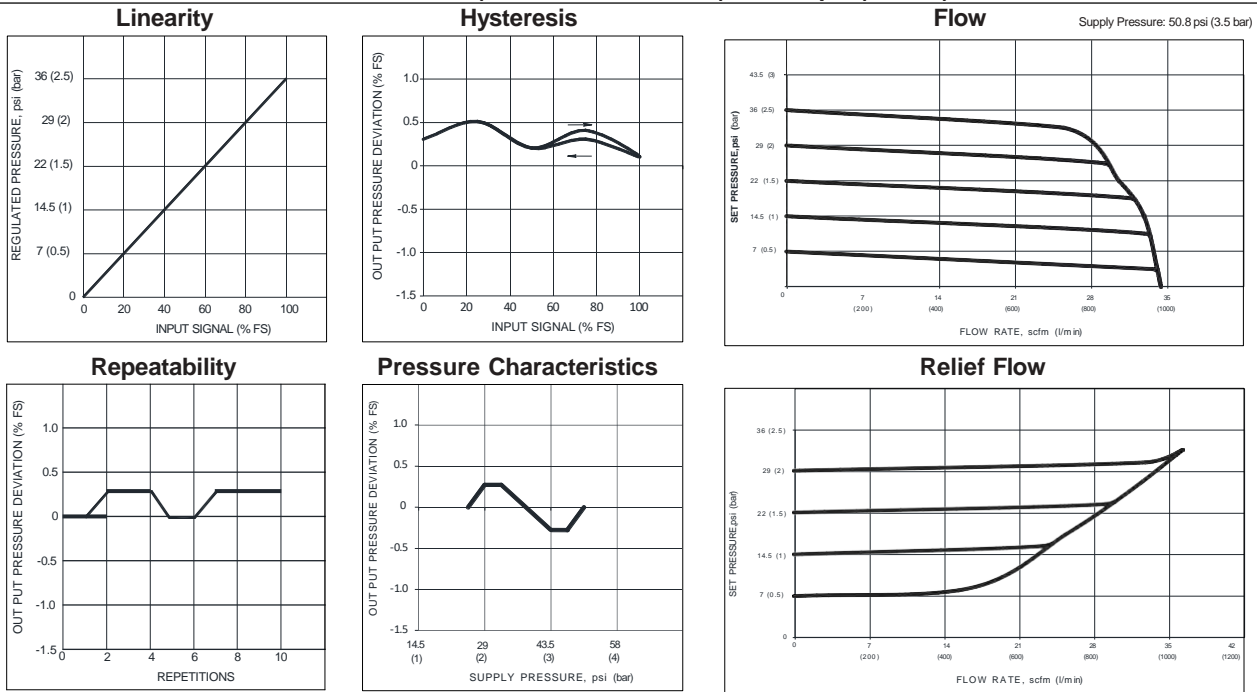
**Relief Flow**



**3704 (1/2" NPT), 0.7-36 psi (2.5 bar)**

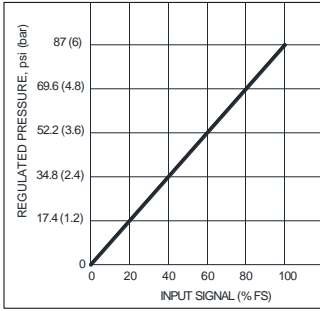


**3702 & 3703 (1/4" NPT & 3/8" NPT), 0.7-36 psi (2.5 bar)**

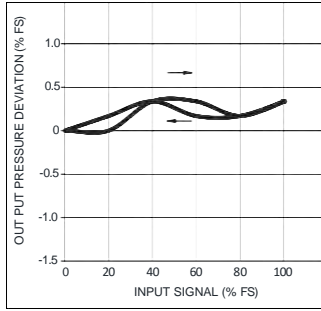


**3704 (1/2" NPT), 0.7-87 psi (6 bar)**

**Linearity**

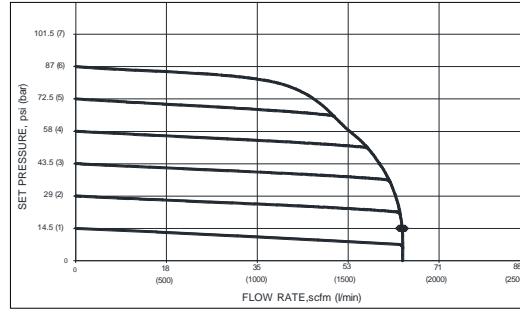


**Hysteresis**

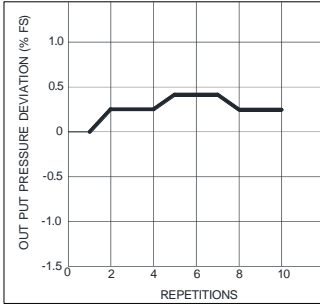


**Flow**

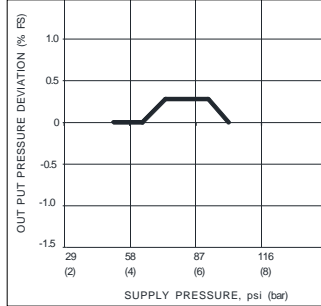
Supply Pressure: 101.5 psi (7 bar)



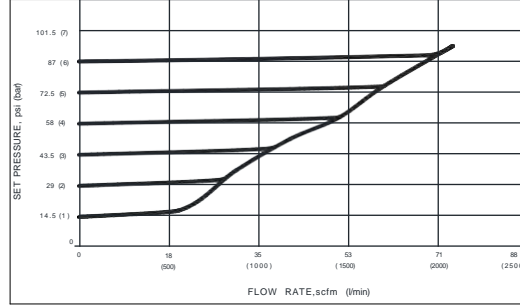
**Repeatability**



**Pressure Characteristics**

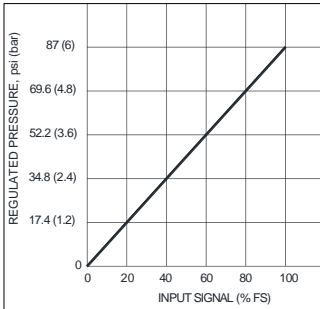


**Relief Flow**

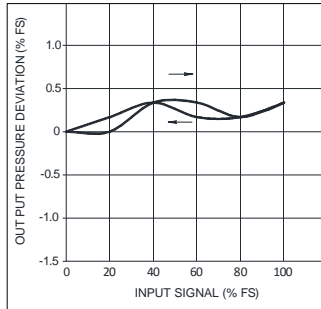


**3702 & 3703 (1/4" NPT & 3/8" NPT), 0.7-87 psi (6 bar)**

**Linearity**

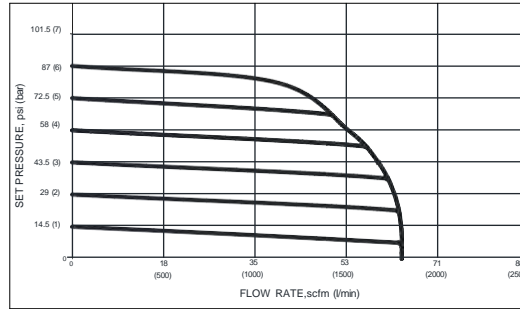


**Hysteresis**

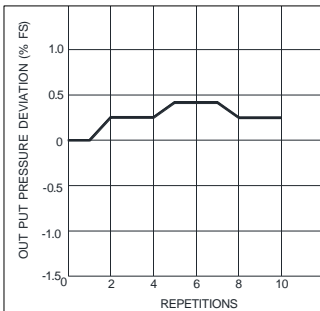


**Flow**

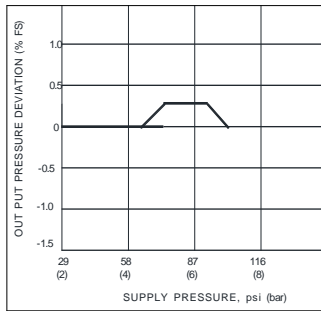
Supply Pressure: 101.5 psi (7 bar)



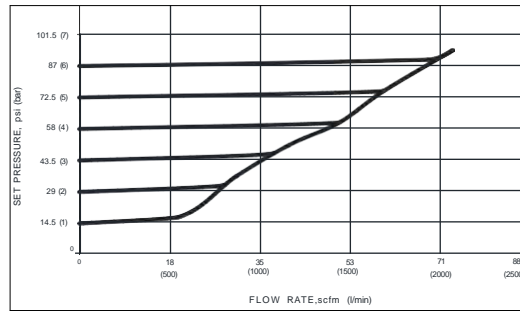
**Repeatability**



**Pressure Characteristics**



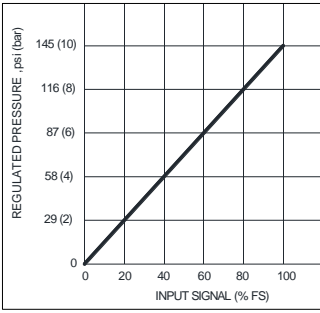
**Relief Flow**



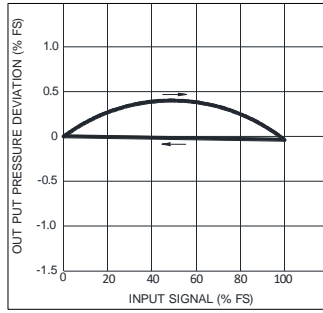


**3704 (1/2" NPT), 0.7-145 psi (10 bar)**

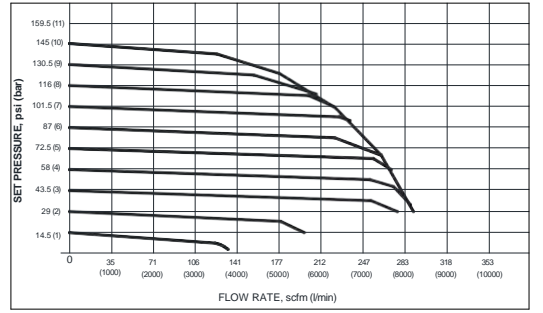
**Linearity**



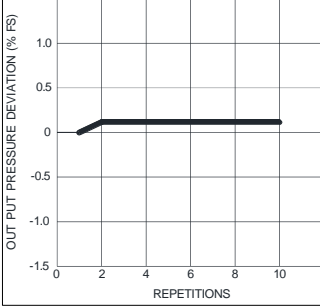
**Hysteresis**



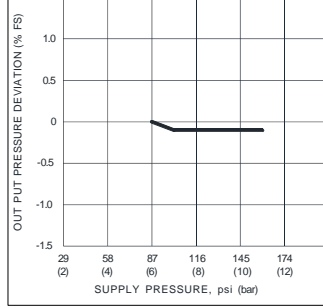
**Flow**



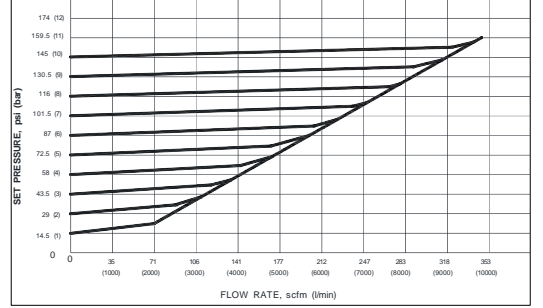
**Repeatability**



**Pressure Characteristics**

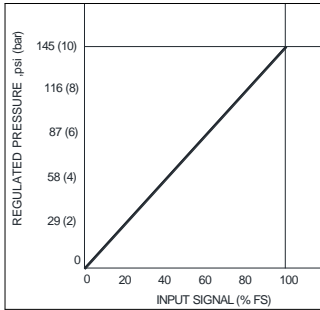


**Relief Flow**

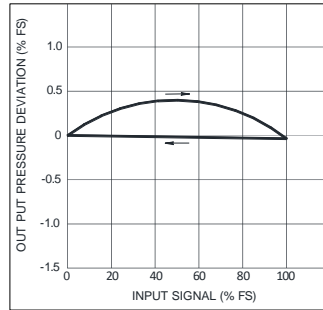


**3702 & 3703 (1/4" NPT & 3/8" NPT), 0.7-145 psi (10 bar)**

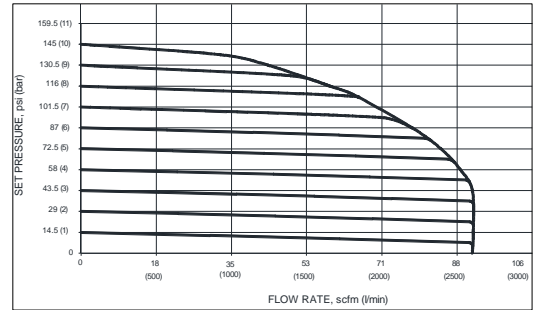
**Linearity**



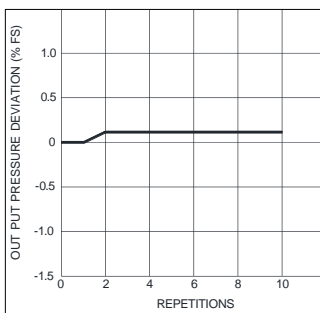
**Hysteresis**



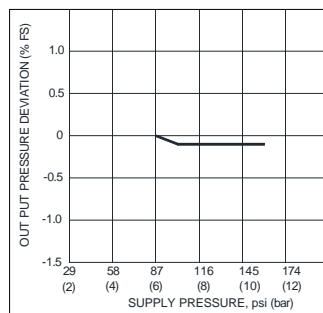
**Flow**



**Repeatability**



**Pressure Characteristics**



**Relief Flow**

