

QB1T | QB2T



Optional Digital Display Shown
Oxygen Service Available

PRESSURE RANGE	Full Vacuum to 175 psig (12 Bar)
ACCURACY REPEATABILITY	±0.2% F.S. ±0.02% F.S.
MAX FLOW	1.2 SCFM (34 slpm)
PORTS	1/8" NPT

Available with Modbus RS232 & RS485

The QB1T & QB2T electro-pneumatic closed loop pressure control valves are in a compact IP65 housing. Analog monitor output is standard, select 0-10 VDC or 4-20 mA. The dual loop accepts a feedback signal from a wide range of external sensors.

These valves are unaffected by mounting position or vibrations to 25Gs. They operate with standard industrial air filtered to 40 micron while not consuming air in a steady state, reducing operating cost.

These units can be assembled to an air piloted regulator (volume booster) for higher flows up to 3,000 SCFM, higher pressures to 7,000 psig and control of various gaseous and liquid media.

QB1S | QB2S



Optional Digital Display Available
Oxygen Service Available

PRESSURE RANGE	Full Vacuum to 500 psig (34 Bar)
ACCURACY REPEATABILITY	±0.25% F.S. ±0.05% F.S.
MAX FLOW	1.2 SCFM (34 slpm)
PORTS	1/8" NPT

Available with Modbus RS232 & RS485

The QB1S & QB2S electro-pneumatic closed loop pressure control valves are in a compact IP65 housing. Analog monitor output is standard, select 0-10 VDC or 4-20 mA. The dual loop accepts a feedback signal from a wide range of external sensors.

These valves are unaffected by mounting position or vibrations to 25Gs. They operate with standard industrial air filtered to 40 micron while not consuming air in a steady state, reducing operating cost.

These units can be assembled to an air piloted regulator (volume booster) for higher flows up to 3,000 SCFM, higher pressures to 7,000 psig and control of various gaseous and liquid media.

QB1X | QB2X

PRESSURE RANGE	Full Vacuum to 175 psig (12 Bar)
ACCURACY REPEATABILITY	±0.2% F.S. ±0.02% F.S.
MAX FLOW	1.2 SCFM (34 slpm)
PORTS	1/8" NPT

Available with Modbus RS232 & RS485

The QB1X & QB2X electro-pneumatic closed loop pressure control valves are in a compact IP65 housing. Analog monitor output is standard, select 0-10 VDC or 4-20 mA. The dual loop accepts a feedback signal from a wide range of external sensors.

These valves are unaffected by mounting position or vibrations to 25Gs. They operate with standard industrial air filtered to 40 micron while not consuming air in a steady state, reducing operating cost.

These units can be assembled to an air piloted regulator (volume booster) for higher flows up to 3,000 SCFM, higher pressures to 7,000 psig and control of various gaseous and liquid media.



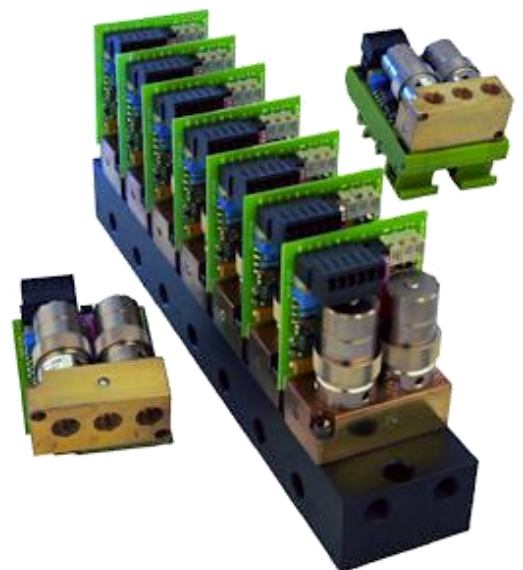
Optional Ethernet Model Shown
Optional Digital Display Available
Oxygen Service Available

MM1 | MM2

PRESSURE RANGE	Full Vacuum to 175 psig (12 Bar)
ACCURACY REPEATABILITY	±0.2% F.S. ±0.02% F.S.
MAX FLOW	1.2 SCFM (34 slpm)
PORTS	1/8" NPT

The MM1 & MM2 electro-pneumatic closed loop air pressure control valves are available with DIN rail, panel mount or up to 16 station sub-base manifold mounting. Analog monitor output is standard, select 0-10 VDC or 4-20 mA. Jumper selectable command 0-10 VDC or 4-20 mA.

Common supply and exhaust ports on sub-base manifold for easy plumbing. Adjustable dead band allows field tuning of system stability. The dual loop design accepts feedback signal from a wide range of external sensors.



QB3



Optional Digital Display Shown
Oxygen Service Available

PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±0.25% F.S. ±0.2% F.S.
MAX FLOW	30 SCFM (850 slpm)
PORTS	¼" NPT

Available with Modbus RS232 & RS485

The QB3 is a complete electronic pressure regulator package consisting of two feed and bleed solenoid valves, a control circuit, pressure transducer, and an integral air pilot operated volume booster all in a rugged IP65 housing.

Analog monitor output signal is standard, select 0-10 VDC or 4-20 mA. Select 0-10 VDC or 4-20 mA differential command signal.

Available options include digital display, manifold mount, a variety of wetted elastomers and brass body version cleaned for oxygen service.

QB3H



Oxygen Service Available

PRESSURE RANGE	Full Vacuum to 500 psig (34 Bar)
ACCURACY REPEATABILITY	±0.5% F.S. ±0.2% F.S.
MAX FLOW	50 SCFM (1,416 slpm)
PORTS	⅜" NPT (½" Optional)

Available with Modbus RS232 & RS485

The QB3H electronic pressure regulator consists of two solenoid valves which add or subtract pressure to the pilot of an integral volume boosting regulator. An internal stainless steel pressure sensor measures the high pressure output of the integral volume booster and sends this signal to the on-board controller.

Available in lightweight aluminum, stainless steel or oxygen service compatible brass bodies.

PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±0.4% F.S. ±0.3% F.S.
MAX FLOW	200 SCFM (5,663 slpm)
PORTS	½" NPT (¾" Optional)

Available with Modbus RS232 & RS485

The QB4 is made up of two solenoid valves, internal pressure transducer and an electronic control circuit mounted to an integral volume booster in a compact IP65 rated housing. Output pressure is proportional to an electrical input (command signal). Command signals come in a choice of either a differential 0-10 VDC or 4-20 mA.

The QB4 also provides an electrical monitor signal for output to a panel meter or controller for data acquisition or quality assurance needs. It is the actual work pressure that is sensed and fed back to the control circuit so any mechanical hysteresis of the air piloted volume booster is automatically compensated for; allowing for extraordinary accuracy and repeatability.



Optional Digital Display Available
Oxygen Service Available

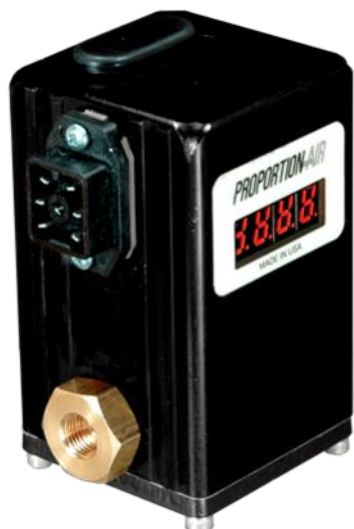
PRESSURE RANGE	Full Vacuum to 1,000 psig (69 Bar)
ACCURACY REPEATABILITY	±0.25% F.S. ±0.15% F.S.
RESOLUTION	±0.10% F.S.
MAX FLOW	26 SCFM @ 1,000 psi (736 slpm)
PORTS	⅛" NPT

The GX1 & GX2 high pressure control pressure valve offers precision pressure control without the need for a ratio amplifying regulator. This series includes a power and status indicator LED and is field serviceable with field modifiable command and monitor signals.

Analog monitor output is standard, select 0-10 VDC or 4-20 mA TTL. Select 0-10 VDC or 4-20 mA differential command signal. The GX1 & GX2 can be assembled to a volume booster for higher flow. This is a complete re-design of the popular GP model. The GX improves upon the GP in *virtually* every aspect.



Oxygen Service Available
The GP Re-Designed

QPV1 | QPV2

Optional Digital Display Shown
Oxygen Service Available

PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY RESOLUTION	±0.2% F.S. up to ±0.005% F.S.
MAX FLOW	1 SCFM (28 slpm)
PORTS	1/8" NPT

Available with Modbus RS232 & RS485

The QPV1 & QPV2 is an ultra-high resolution electro-pneumatic closed loop proportional pressure control valve. The QPV utilizes a variable orifice valve on the inlet side which eliminates the digital steps of traditional ON/OFF solenoids. The field adjustable hysteresis potentiometer allows users to virtually eliminate the dead-band of the control circuit, resulting in superior system resolution. Ideal for very sensitive applications such as leak testing at low pressures and dispensing applications.

Analog monitor output is standard, select 0-10 VDC or 4-20 mA. The dual loop design accepts a feedback signal from a wide range of external sensors, including the F-Series flow monitor for closed loop flow control and pressure, vacuum or force transducers.

MPV1 | MPV2

PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY RESOLUTION	±0.2% F.S. up to ±0.005% F.S.
MAX FLOW	1 SCFM (28 slpm)
PORTS	1/8" NPT

The MPV1 & MPV2 is an ultra-high resolution electro-pneumatic closed loop proportional pressure control valve. The QPV utilizes a variable orifice valve on the inlet side which eliminates the digital steps of traditional ON/OFF solenoids. The field adjustable hysteresis potentiometer allows users to virtually eliminate the dead-band of the control circuit, resulting in superior system resolution. Ideal for very sensitive applications such as leak testing at low pressures and dispensing applications.

Common supply inlet and exhaust ports with manifold mount assembly. MPV2 accepts feedback signal of pressure, vacuum or force. DIN Rail, panel mount or up to 16 station sub-base manifold mounting options available.

SPV1 | SPV2

PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±0.2% F.S. up to ±0.02% F.S.
MAX FLOW	1 SCFM (28 slpm)
PORTS	1/8" NPT

The SPV is a high resolution electro-pneumatic closed loop proportional pressure control valve. It uses a variable orifice inlet valve which eliminates the digital steps of traditional ON/OFF solenoids.

The field adjustable hysteresis potentiometer allows users to virtually eliminate the dead-band of the control circuit, resulting in superior system resolution. Its small foot print makes it a space saver. Analog monitor output signal is 0-10 VDC.



QL3

PRESSURE RANGE	0-5 psig through 0-125 psig (8.6 Bar)
ACCURACY REPEATABILITY	±0.4% F.S. ±0.05% F.S.
MAX FLOW	25 SCFM (708 slpm)
PORTS	1/4" NPT

Available with Modbus RS232 & RS485

The QL3 electro-pneumatic closed loop pressure control valves are in a compact IP65 rated housing. The QL3 allows high volumes of air to move quickly and precisely using proportional solenoid valves with a unique analog PID circuit. Ideal for use with flow meters, it provides high resolution and smooth pressure control at high and low flow rates and avoids the "steps" prevalent in most feed and bleed I/Ps. The pneumatic output is proportional to the input command signal.

Analog monitor output is standard, select 0-10 VDC or 4-20 mA. Select 0-10 VDC or 4-20 mA differential command signal. Available options include digital display and manifold mount.



*Optional Digital Display Available
Oxygen Service Available*

ISQB1



PRESSURE RANGE	0 to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±0.5% F.S. ±0.2% F.S.
MAX FLOW	0.8 SCFM (23 slpm)
PORTS	1/8" NPT

The ISQB1 is an intrinsically safe-Factory Mutual (Class I, II, III, Division 1 Groups C, D, E, F, G) electro-pneumatic closed loop pressure control valve offered with standard 4-20 mA analog command signal. It can be assembled to air piloted regulator for high flow, higher pressure and various media.

HAZARDOUS AREA CLASSIFICATION

ISQB: Rated intrinsically safe and is Factory Mutual approved for Class I, II & III, Division 1, Groups C, D, E, F, & G.

ISF1



PRESSURE RANGE	Full Vacuum to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±0.5% F.S. ±0.2% F.S.
MAX FLOW	0.8 SCFM (23 slpm)
PORTS	1/8" NPT

Hazardous media such as natural gas can be directly controlled with the ISF1 Nonincindive-Factory Mutual (Class II, Division 2 Groups C, D) electro-pneumatic closed loop pressure control valve. Offered with standard 4-20 mA analog command signal and 13.5 to 29 VDC supply voltage. Can be assembled to air piloted regulator for high flow, higher pressures and various media control.

HAZARDOUS AREA CLASSIFICATION

ISF1: Nonincindive for use in Class II, Division 2, Groups C and D T4; Type 4X hazardous (classified) locations and suitable for use in Class II, Division 2, Groups E, F and G T4; Type 4X hazardous (classified) locations.

PRESSURE RANGE	up to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±4% F.S. ±0.25% F.S.
MAX FLOW	250 SCFM (7,080 slpm)
PORTS	¼ to 1½" NPT

FR flow monitor is a pressure regulated mass flow transducer which provides flow measurement in real time, less than 10ms. There are no moving parts and it is immune to vibration up to 25G. They operate with standard industrial air filtered to 40 micron. Saturated or lubed air will not affect the F-Series performance.

It is an ideal flow monitoring device where real time flow measurement is critical to a process. Analog outputs of 0-10 VDC and 4-20 mA are available. It can be teamed up with a Proportion-Air flow controller for closed loop flow control. The FR flow monitor can be calibrated for a variety of inert gases. Pressure compensated models also available.



*Optional Digital Display Shown
Oxygen Service Available*

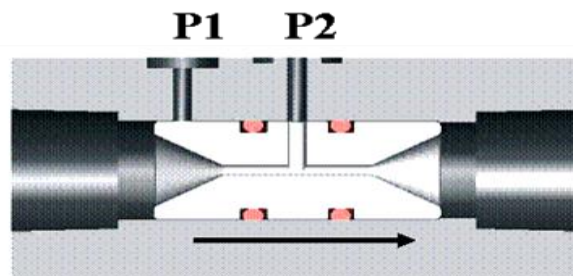
FLOW CONTROL

Real-time flow control meets the challenges of "high cycle" production

The high cycle rates of many manufacturing processes call for flow control that reacts immediately to system changes. Most flow meters monitor the flow by sensing physical changes in resistance or temperature then using this information to calculate and output the result. These devices are relatively slow with update rates from one or two hundred milliseconds to several seconds. These lengthy update times are often so slow that the cycle is complete before the actual flow rate can be determined.

Proportion-Air's F-Series flow monitor senses differential pressure across a calibrated venturi. Its output is virtually instantaneous <10ms and is continuous.

Differential Pressure Based Flow Measurement



FQPV2



Optional Digital Display Shown
Oxygen Service Available

PRESSURE RANGE	up to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±4% F.S. ±0.25% F.S.
MAX FLOW	1 SCFM (28 slpm)
PORTS	¼" to 1½" NPT

The FQPV/F-Series closed loop flow control is built in a compact IP65 rated housing. The FPQV compares the command signal from the customer's controller with feedback from the F-Series flow transducer for active closed loop control. The unit controls the flow of air & a variety of inert gases.

These assemblies are unaffected by mounting position or vibrations to 25Gs. They operate with standard industrial air filtered to 40 micron.

Minimum inlet pressure is 15 psig.

FQB3



Optional Digital Display Shown
Oxygen Service Available

PRESSURE RANGE	up to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±4% F.S. ±0.25% F.S.
MAX FLOW	25 SCFM (708 slpm)
PORTS	¼" to 1½" NPT

The FQB3/F-Series can be used for closed loop flow control. The FQB3 compares the command signal from the customer's controller with feedback from the F-Series flow transducer for active closed loop control. This series offers a flow monitor and control valve assembly with a <10ms response time.

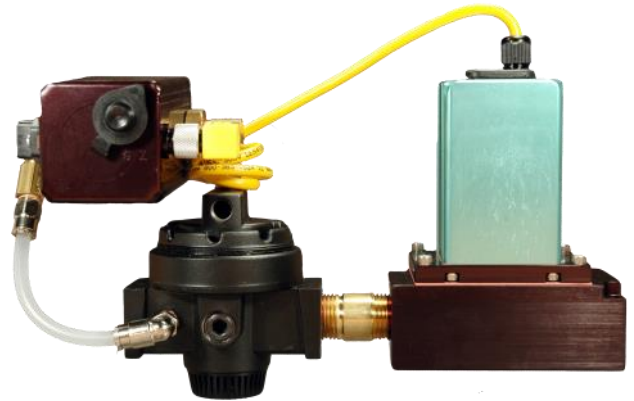
A variety of command signals are available on the FQB3. The assembly operates with standard industrial air filtered to 40 micron. Saturated air and lubed air will not affect performance. Optional digital display is available.

FQB2/PSR

PRESSURE RANGE	up to 150 psig (10 Bar)
ACCURACY REPEATABILITY	±4% F.S. ±0.25% F.S.
MAX FLOW	250 SCFM (7,080 slpm)
PORTS	¼" to 1½" NPT

The FQB2/PSR/F-Series allows for high flow closed loop flow control offering active "real time" flow control. The FQB2 compares the command signal from the customer's controller with feedback from the F-Series flow transducer for active closed loop control. The pressure compensated model controls flow regardless of input pressure fluctuation (up to 50% fluctuation). They can be used to control the velocity of pneumatic cylinders with great repeatability.

Standard industrial air quality filtered to 40 micron will not harm this controller. Saturated air and lubed air will not affect performance.



*Optional Digital Display Available
Oxygen Service Available*

FCV

PRESSURE RANGE	up to 250 psig (17 Bar)
ACCURACY RESOLUTION	±5% F.S. ±0.3% F.S.
VALVE Cv	0 to 19 Linear to Command
PORT	1" NPT

303 Stainless Steel Valve Body with 300:1 Turndown Ratio

The FCV flow control valve is a robust flow control product that compares a command signal input with feedback from an on-board LVDT to proportionally control Cv. The maximum valve travel is 1 inch. An analog monitor output showing position of the plug from the seat can be used for data acquisition. A double-lip radial seal takes the place of standard valve packing so packing nut adjusting is eliminated. Seal replacement and seat replacement can be accomplished without removing the valve body from piping.

The FCV is available with 0-10 VDC differential or 4-20 mA differential command signal. Valve position monitor can be 0-10 VDC or 4-20 mA. Parabolic valve trim allows output to be linear and proportional to command input. Reduce trim of 3/4" available. The FCV contains a replaceable seat and trim.



DS SERIES



PRESSURE RANGE Full Vacuum to 7,000 psig (483 Bar)

DSB & DSW ACCURACY | REPEATABILITY $\pm 0.2\%$ F.S. | up to $\pm 0.02\%$ F.S.

DST ACCURACY | REPEATABILITY $\pm 0.5\%$ F.S. | up to $\pm 0.25\%$ F.S.

PORTS $\frac{1}{4}$ and $\frac{1}{8}$ " NPT and BSPT

For air, gases and liquids (stainless steel optional)

The DS Series pressure transducers offer high accuracy, cost effective pressure transducers for vacuum only, vacuum through positive pressure or positive pressure only. The lowest calibrated positive pressure range is 0-12 inches of water column.

The DS Series provides wide pressure ranges from vacuum through 7,000 psig (483 bar) and field adjustable zero and span potentiometers. Available for either voltage or current outputs.

Oxygen Service Available

DSL

PRESSURE RANGE Full Vacuum to 30 psig (2 Bar)

DSL ACCURACY | REPEATABILITY $\pm 0.2\%$ F.S. | up to $\pm 0.02\%$ F.S.

PORTS 10-32 Pnuematic Connection

For air and inert gases



The DSL is a transducer which senses gauge vacuum and positive pressure and converts this to a 0-10 VDC analog electrical output signal. The 0-10 VDC output signal is a linear ratio to the sensed pressure. The device output signal is independent of the supply voltage. It can be calibrated any range of pressure from full vacuum up to 30 psig (2 bar).

The DSL utilizes piezo-resistive strain gauge sensor housed in a miniature rugged anodized aluminum canister. A strain relief protects the wiring from excessive pulling force. Multiple cable lengths available.

Oxygen Service Available

- Closed loop device with 4-20 mA command (*Electronic Pilot*)
- Works with standard industrial air, no instrument air required (*Electronic Pilot*)
- Available in single or dual loop configuration (*Electronic Pilot*)
- Fails closed at loss of power to maintain pressure (*Electronic Pilot*)
- No dithering of the command is required
- Automatically maintains correct pressure (*temperature*) at all times
- No dithering extends diaphragm life even further
- Carbon steel, flange mount body



THE TEMPERATURE OF SATURATED STEAM IS DIRECTLY PROPORTIONAL TO THE PRESSURE

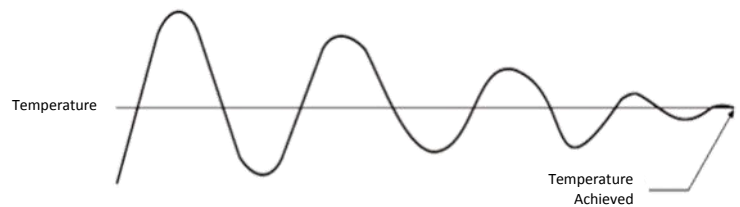
Why replace your process valve with the BD-Series?



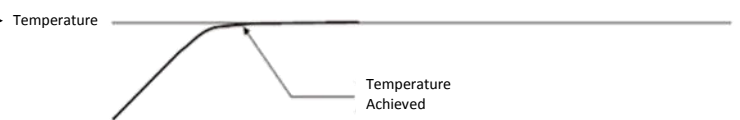
Highly sophisticated
Expensive package
Many parts for total system
Requires trained operator

Mold temperature was achieved in 10 min vs. 45 min - the old way

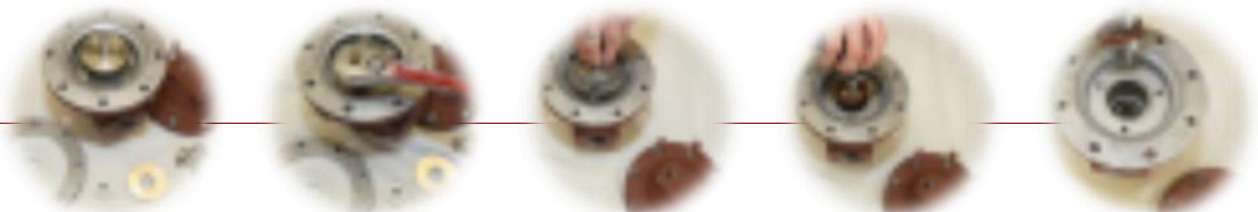
Process Valve (Old Way)



Proportion-Air (New Way)



REPLACE & REPAIR INTERNAL COMPONENTS WITHOUT REMOVING FROM LINE



PSR

MAX OUTLET PRESSURE	up to 200 psig (14 Bar)
MAX FORWARD FLOW	700 SCFM (19,822 slpm)
MAX RELIEF FLOW	12 SCFM (340 slpm)
PORTS	¼ to 1½" NPT



R000B & R000C

MAX OUTLET PRESSURE	up to 300 psig (21 Bar)
MAX FORWARD FLOW	2,000 SCFM (56,633 slpm)
MAX RELIEF FLOW	200 SCFM (5,663 slpm)
PORTS	1½" and 2" NPT



RM SERIES

MAX OUTLET PRESSURE	up to 300 psig (21 Bar)
MAX FORWARD FLOW	550 SCFM (15,574 slpm)
MAX RELIEF FLOW	200 SCFM (5,663 slpm)
PORTS	¼ to 1½" NPT



RV SERIES (Vacuum)

MAX OUTLET PRESSURE	0 to 29.9 inches Hg Vacuum (0-759 mmHg)
MAX FORWARD FLOW	45 SCFM (1,274 slpm)
PORTS	¼ to 1½" NPT



RP SERIES

MAX OUTLET PRESSURE	up to 350 psig (24 Bar)
MAX FORWARD FLOW	250 SCFM (7,079 slpm)
PORTS	¼ to 1½" NPT

Oxygen Clean Available



RG2712 & RG2713



MAX OUTLET PRESSURE up to 150 psig (10 Bar)
MAX FORWARD FLOW 45 SCFM (1,274 slpm)
MAX RELIEF FLOW 11 SCFM (311 slpm)
PORTS ¼" and ⅜" NPT

RG0003



MAX OUTLET PRESSURE up to 100 psig (6.9 Bar)
MAX FORWARD FLOW 1 Gal/min (3.7 lit/min)
PORTS ¼" NPT

For Liquids | Stainless Steel Available

RG873V



MAX OUTLET PRESSURE up to 6,000 psig (414 Bar)
MAX FORWARD FLOW 150 SCFM (4,248 slpm)
PORTS ¼" Inlet and ½" Outlet (NPT)

Self-Venting

RQ



MAX OUTLET PRESSURE up to 250 psig (17 Bar)
MAX FORWARD FLOW 700 SCFM (19,822 slpm)
MAX RELIEF FLOW 120 SCFM (4,000 slpm)
PORTS ¼" to 1¼" NPT

RG1262 & RG1262-1500



MAX OUTLET PRESSURE up to 6,000 psig (414 Bar)
FLOW COEFFICIENT (Cv) 0.05
RATIO REGULATORS 45:1 and 15:1
PORTS ¼" NPT

Self-Venting

DC

POTENTIOMETER



- Rotary potentiometer command signal generators
- Signal conditioned to provide a linear analog output signal
- Available as 0-10 VDC or 4-20 mA output signal
- Available in one-turn and ten-turn design
- Available with numeric indicator

FPP

IN-LINE FILTER



- 1/8, 1/4, 3/8 and 1/2 NPT
- 40 - 100 micron filtration
- Brass construction standard
- Stainless steel version available
- Compact size
- Low pressure drop

US1 & US2

ULTRASONIC SENSOR



US1

- Provides non-contact position sensing
- Variety of analog outputs
- Analog output is proportional to distance measured
- Range of operation is field scalable
- Detects objects from 6.5 inches (0.17m) to 37 feet (11.3m)
- Field adjustable distance settings
- Includes two field adjustable switch settings
- RS-232 compatible



US2

- Non-contact sensing - 1.7 inches (0.04m) to 14 feet (4.2m)
- Rugged stainless steel housing
- Analog output proportional to distance measured
- User adjustable settings for application flexibility
- LED indication of target status (*In range, no target, too close*)

PANEL METER

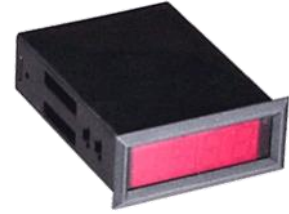
- 3-½ digit panel meter display
- LED is visible in almost any application environment
- 200 mA maximum power requirement
- 15 VDC power is standard
- Optional 12 to 24 VDC power

- 3-½ digit panel meter display
- LCD display
- 100 mA maximum
- 12 to 15 VDC power standard
- Optional 24 VDC power

- 4-½ digit LED panel meter display
- LED is visible in almost any application environment
- 225 mA maximum power
- 8 VDC to 18 VDC power

PM-1, 3 & 4

PM-1



PM-3



PM-4



POWER SUPPLY

PS4515, PS4524 PS300 & SELECT 6

- 15 VDC (PS4515) or 24 VDC (PS4524) output voltage
- 2.8 A (PS4515) or 2.0 A (PS4524) output current
- 110 to 240 VAC input power
- DIN rail mounted, high efficiency and low working temperature
- CE & UL approved with built in EMI filter and low ripple noise

PS4515/24



- 15 VDC output voltage, 600 mA output current
- 110 or 220 VAC input power options
- Power indicator LED
- Safety fuse protected

PS300



- 15 VDC output voltage, 600 mA output current
- Allows up to six user adjustable voltage outputs
- Can be configured with remote potentiometers
- Wide range of select inputs & power voltage in both AC or DC

SELECT 6

