Short Form Catalogue

Precision Pneumatic and Electropneumatic Controls

- Current-to-Pressure (I/P) Transducers
- Voltage-to-Pressure (E/P) Transducers
- Pressure-to-Current (P/I) Transducers
- Precision Air Pressure Regulators
- Valve Positioners
- Filter Regulators
- Volume Boosters
- Snap Acting Relays & Bias Relays
- Motorized Regulators
- Liquid Level Systems
- Friction-free Diaphragm Air Cylinders
- Custom Engineered Devices

ControlAir Inc.

PRECISION PNEUMATIC & ELECTROPNEUMATIC CONTROLS

Regulators

Type 90

Compact, lightweight unit provides precise pressure regulation for space-limited applications.

- High resolution adjustment of set pressure
- Will fit into tight space requirements
- Light weight die cast aluminum construction

Subminiature Precision Air Pressure Regulator

Flow capacity SCFM (NL/min)	14 (420)
Exhaust Capacity SCFM (NL/min)	7 (210)
Sensitivity Inch wc (mm)	.25 (6.4)
Supply Pressure Max PSIG (BAR)	150 (10)
Approximate Size (inches)	1.38x1.38x3.88
Approximate Size (mm)	35.1x35.1x98.5

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
0.70-30 (0.05-2)	1/8"	90-AA/90-UA
1.4-60 (0.1-4)	1/8"	90-AB/90-UB
1.4-120 (0.1-8)	1/8"	90-AC/90-UC

Type 100

Multi-stage regulator provides the highest level of regulation accuracy and repeatability available. Output pressure is controlled to within 0.1% of full range.

- Able to hold set pressure over long periods of time
- High relief capacity, plunger operated, manifold mounted, and low range models are available

Precision Air Pressure Regulator

Flow Capacity SCFM (Nl/min)	14 (420)
Exhaust Capacity SCFM (Nl/min)	3 (90)
Sensitivity Inch wc (mm)	0.125 (3.2)
Supply Pressure Max PSIG (BAR)	150 (10)
Approximate Size (inches)	2.0 x 2.06 x 4.26
Approximate Size (mm)	52 x 52 x 108

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
2-40 (0.14-2.7)	1/8	100-AA/100-AAU
	1/4	100-BA/100-BAU
	3/8	100-CA/100-CAU
2-60 (0.14-4)	1/8	100-AB/100-ABU
	1/4	100-BB/100-BBU
	3/8	100-CB/100-CBU
2-120 (0.14-8)	1/8	100-AC/100-ACU
	1/4	100-BC/100-BCU
	3/8	100-CC/100-CCU

Also Available:

Type 100HR High Relief Capacity

Same specifications as Type 100 except for the following:

Exhaust Capacity: 11 scfm (330 Nl/min)

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
2-120 (0.14-8.2)	1/4	110-BC/110-BCU
2-120 (0.14-8.2)	3/8	110-CC/110-CCU

Also Available:

Type 100EHR Extra High Relief Capacity

Same specifications as Type 100 except for the following:

Exhaust Capacity: 15 scfm (450 Nl/min)

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
2-120 (0.14-8.2)	1/4	111-BC/111-BCU
2-120 (0.14-8.2)	3/8	111-CC/111-CCU

Also Available:

Type 100LR Low Range

Same specifications as Type 100 except for the following:

Supply Pressure, Maximum: 50 psig (3.4 BAR)

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
0.5-25 (0.03-1.7)	1/4	120-BA/120-BAU

Also Available:

Type 100BP Bottom Ported

Same specifications as Type 100 except for the following:

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
2-40 (0.14-2.7)		140-BA / 140-BAU
2-60 (0.14-4.1)		140-BB / 140-BBU
2-120 (0.14-8.2)		140-BC / 140-BCU

Also Available:

Type 100PL Plunger

Same specifications as Type 100 except for the following:

Range PSIG (BAR)	Port Size NPT/BSP	Model# NPT/BSP
2-40 (0.14-8.2)	1/8	150-AA/150-AAU
2-60 (0.14-8.2)	1/8	150-AB/150-ABU
2-120 (0.14-8.2)	1/8	150-AC/150-ACU
2-40 (0.14-8.2)	1/4	150-BA/150-BAU
2-60 (0.14-8.2)	1/4	150-BB/150-BBU
2-120 (0.14-8.2)	1/4	150-BC/150-BCU
2-40 (0.14-8.2)	3/8	150-CA/150-CAU
2-60 (0.14-8.2)	3/8	150-CB/150-CBU
2-120 (0.14-8.2)	3/8	150-CC/150-CCU

Type 100M

Designed to provide precise pneumatic control by using an electrical control.

- Ideal for control from a remote location
- Regulation accuracy and sensitivity of the Type 100
- Maintains set output pressure in the event of a power failure
- Compact size

Motorized Precision Air Pressure Regulator

Flow Capacity SCFM (Nl/min)	14 (396)
Exhaust Capacity SCFM (Nl/min)	5 (3.5)
Total Air Consumption SCFM	0.10
Supply Pressure Max PSIG (BAR)	150 (10)
Motor Type	Reversible, synchronous motor with gear drive and slip clutch
Torque	Approx. 8 in. oz.

Range PSIG (BAR)	Approx. Time to Cover Full Range (seconds) 2RPM	6RPM
2-40 (0.14-2.8)	120	40
2-60 (0.14-4)	90	30
2-120 (0.14-8.3)	150	50

Type 300

Designed to provide clean, accurate air pressure to instruments, valves, and other control equipment. Durable materials of construction in combination with an epoxy paint finish provide long lasting corrosion resistance in harsh industrial environments.

- Provides constant control of pressure under variable flow rates and supply pressures
- High capacity, long lasting depth filter
- Epoxy finish is standard
- Low droop
- Materials in the Type 310 meet NACE MR-01-75 requirements

Instrument Air Filter & Regulator

Flow Capacity SCFM (Nl/min)	22 (660)
Exhaust Capacity SCFM (Nl/min)	0.1 (3)
Sensitivity Inch wc (mm)	1.0 (25.0)
Supply Pressure Max PSIG (BAR)	250 (17)
Type 300 & Type 310 Filter Regulators	
Approximate Size (inches)	3.13 x 3.13 x 7.50
Approximate Size (mm)	80 x 80 x 190

Type 300/Type 310 NACE

Range PSIG (BAR)	Port Size NPT	Model#
0-10 (0-0.7)	1/4	300-BD
0-30 (0-2)	1/4	300-BA/310-BA
0-60 (0-4)	1/4	300-BB/310-BB
0-100 (0-6.8)	1/4	310-BC
0-120 (0-8.0)	1/4	300-BC

Type 330/340

- Now available with high flow 1/2" NPT
- Direct, pipe or bracket mounting
- Tapped exhaust and panel mount options
- Second gauge port

Instrument Air Filter Regulator & Regulator

Exhaust Capacity SCFM (Nl/min)	0.1 (3)
Sensitivity Inch wc (mm)	1.0 (25.0)
Supply Pressure Max PSIG (BAR)	250 (17)
Auto Drain	
Supply Pressure Max PSIG (BAR	150 psig (10)
Cv Values: 1/4"NPT 0.5 at 150 psig supply and 80 psig setpoint	
1/2"NPT 2.5 at 150 psig suppy and 80 psig setpoint	

Range PSIG (BAR)	Port Size NPT	Filter Regulator Model #	Regulator Model #
0-30 (0-2)	1/4, 1/2	330-BAB, 330-DAB	340-BAB, 340-DAB
0-60 (0-4)	1/4, 1/2	330-BBB, 330-DBB	340-BBB, 340-DBB
0-120 (0-8)	1/4, 1/2	330-BCB, 330-DCB	340-BCB, 340-DCB

Designed to provide clean, accurate air pressure to instruments, valves and other automatic control equipment in a lightweight compact housing. Durable construction withstands harsh environments. The Type-330 provides pressure regulation and filtration in an integral compact package. The Type 340 provides accurate, constant control under variable flow rates and supply pressures.

Type 400

General purpose regulator provides reliable performance under variable operating conditions.

- Repeatable pressure output
- Corrosion-resistant construction
- Low cost makes this unit ideal for high volume OEM applications

General Service Pressure Regulator

Flow Capacity SCFM (Nl/min)	20 (600)
Exhaust Capacity SCFM (Nl/min)	0.1 (3)
Sensitivity Inch wc (mm)	1.0 (25.0)
Supply Pressure Max PSIG (BAR)	250 (17)
Approximate Size (inches)	DIA 2.5 H 5.63
Approximate Size (mm)	DIA 63 H 143

Range PSIG (BAR)	Port Size NPT	Model#
0-10 (0-0.7)	1/4	400-BD
0-30 (0-2)	1/4	400-BA
0-60 (0-4)	1/4	400-BB
0-120 (0-8)	1/4	400-BC

Regulators

Type 350/360/370SS

Designed to provide instrument quality air in corrosive environments. Will also provide precise pressure control of sour gases.

- 316 Stainless Steel Internal and External
- Viton® Seals
- NACE approved
- Large flow capacity
- Low air consumption
- Tapped exhaust

Stainless Steel Filter Regulator, Regulator & Filter

Maximum Flow Capacity SCFM (Nl/min)	
1/4" NPT	20 (600)
1/2" NPT	160 (4,800)
Exhaust Capacity SCFM (Nl/min)	1.0 (30)
Sensitivity Inch wc (mm)	1.0 (25.0)
Supply Pressure Max PSIG (BAR)	290 (20)
Type 350SS Filter Regulator	
1/4" NPT Approx. Size (inches)	2.13 x 2.13 x 8.11
1/4" NPT Approx. Size (mm)	54.1 x 54.1 x 206
1/2" NPT Approx. Size (inches)	2.13 x 2.72 x 8.52
1/2" NPT Approx. Size (mm)	54.1 x 69.1 x 216.4
Type 360SS Regulator	
Approximate Size (inches)	2.13 x 2.13 x 5.49
Approximate Size (mm)	54.1 x 54.1 x 139.8

Type 350SS Filter Regulator

Range PSIG (BAR)	Port Size NPT	Model#
0-30 (0-2)	1/4, 1/2	350-BA, 350-DA
0-60 (0-4)	1/4, 1/2	350-BB, 350-DB
0-100 (0-7)	1/4, 1/2	350-BC, 350-DC
0-150 (0-10)	1/4, 1/2	350-BD, 350-DD

Type 360SS Regulator

Range PSIG (BAR)	Port Size NPT	Model#
0-30 (0-2)	3/4, 1	360-BA, 360-DA
0-60 (0-4)	3/4, 1	360-BB, 360-DB
0-100 (0-7)	3/4, 1	360-BC, 360-DC
0-150 (0-10)	3/4, 1	360-BD, 360-DD

Type 370SS Filter

	Port Size NPT	Model#
0-30 (0-2)	3/4, 1	370-BX, 370-DX

Type 380/390SS

Type 380/390SS stainless steel series is designed to stand up to the harshest environments while providing highly accurate pressure regulation.

- All 316 stainless steel construction
- 3/4" & 1" NPT/BSP ported version
- High flow capacity
- NACE approved

Stainless Steel Filter Regulator & Regulator

Maximum Flow Coefficients (Cv)	3/4" NPT	6.0
	1" NPT	7.0
Maximum Flow Capacity SCFM (Nl/min)	3/4" NPT	350 (9,905)
	1" NPT	400 (11,320)
Supply Pressure Max PSIG (BAR)	290 (20)	
Operating Temperatures	-40° to 200°F (-40° to 93°C)	
Filter	25 micron or 5 micron filter	
Weight	**Type 380**	15 lbs (6.80 kg)
	Type 390	13 lbs (5.90 kg)

Type 380 Stainless Steel Filter Regulator

Range PSIG (BAR)	Port Size NPT	Model#
0-30 (0-2)	3/4, 1	380-EA, 380-FA
0-60 (0-4)	3/4, 1	380-EB, 380-FB
0-100 (0-7)	3/4, 1	380-EC, 380-FC
0-150 (0-10)	3/4, 1	380-ED, 380-FD
0-200 (0-14)	3/4, 1	380-EE, 380-FE

Type 390 Stainless Steel Regulator

Range PSIG (BAR)	Port Size NPT	Model#
0-30 (0-2)	3/4, 1	390-EA, 390-FA
0-60 (0-4)	3/4, 1	390-EB, 390-FB
0-100 (0-7)	3/4, 1	390-EC, 390-FC
0-150 (0-10)	3/4, 1	390-ED, 390-FD
0-200 (0-14)	3/4, 1	390-EE, 390-FE

Type 3500

General purpose regulator provides reliable performance under variable operating conditions.

- Repeatable pressure output
- Corrosion-resistant construction
- Low cost makes this unit ideal for high volume OEM applications

High Pressure Regulator

Supply Pressure Max PSIG (BAR)	6000 (413)
Temperature Range	-70° to 225°F
Approximate Size (inches)	DIA 3.35 H 6.26
Approximate Size (mm)	DIA 85.1 H 159

Range PSIG (BAR)	Port Size NPT	Adjustment	Model#
0-125 (0-9)	1/4	socket	3500-BC
0-150 (0-10)	1/4	socket	3500-BD
0-225 (0-16)	1/4	socket	3500-BE
0-125 (0-9)	1/4	Tee Handle	3500-CC
0-150 (0-10)	1/4	Tee Handle	3500-CD
0-225 (0-16)	1/4	Tee Handle	3500-CE

Type 700

The Type 700 is ideal for applications that require high flow capacity and accurate pressure control.

- Allows flow capacity up to 80 SCFM
- Dampening action of aspirator tube provides stability under varying flow conditions
- Sensitive to minute changes in down stream pressure

High Flow Precision Pressure Regulator

	700	700BP
Flow Capacity SCFM (Nl/min)	80 (2,400)	50 (1,500)
Exhaust Capacity SCFM (Nl/min)	4 (120)	
Sensitivity Inch wc (mm)	0.25 (6.4)	
Supply Pressure Max PSIG (BAR)	250 (17)	
Approximate Size (inches)	DIA 3.0 H 6.0	
Approximate Size (mm)	DIA 76 H 152	

Range PSIG (BAR)	Port Size NPT	Model#
0-2 (0-0.14)	1/4, 3/8, 1/2	700-BA, 700-CA, 700-DA
0-15 (0-1)	1/4, 3/8, 1/2	700-BC, 700-CC, 700-DC
0-30 (0-2)	1/4, 3/8, 1/2	700-BD, 700-CD, 700-DD
0-60 (0-4)	1/4, 3/8, 1/2	700-BE, 700-CE, 700-DE
0-150 (0-10)	1/4, 3/8, 1/2	700-BF, 700-CF, 700-DF

Type 700BP

The Type 700BP provides sensitive protection against over pressurization in the downstream portion of a pneumatic system. Operates as a high precision relief valve with an adjustable set point.

- Provides quick response to controlled system pressure variation
- Flow capacity up to 50 SCFM
- Compensating flow control from venturi tube design

Precision Back Pressure Regulator

Range PSIG (BAR)	Port Size NPT	Model#
0-2 (0-0.14)	1/4, 3/8, 1/2	710-BA, 710-CA, 710-DA
0-15 (0-1)	1/4, 3/8, 1/2	710-BC, 710-CC, 710-DC
0-30 (0-2)	1/4, 3/8, 1/2	710-BD, 710-CD, 710-DD
0-60 (0-4)	1/4, 3/8, 1/2	710-BE, 710-CE, 710-DE
0-150 (0-10)	1/4, 3/8, 1/2	710-BF, 710-CF, 710-DF

Type 800

Compact unit that supplies precise air pressure regulation for applications where space is limited.

- Flow capacity up to 5 SCFM
- Stable output
- Repeatable
- Self relieving
- Lightweight construction
- Viton® elastomers
- Available with threaded post / manifold mounting

Subminiature Precision Air Pressure Regulator

Flow Capacity SCFM (Nl/min)	5 (150)
Exhaust Capacity SCFM (Nl/min)	0.4 (12)
Supply Pressure Max PSIG (BAR)	250 (17)
Approximate Size (inches)	DIA 1.0 H 3.4
Approximate Size (mm)	DIA 24.5 H 86.4

Range PSIG (BAR)	Port Size		
	1/16 NPT	10-32	M5
0-5 (0-0.4)	800-AA	800-CA	800-BA
0-15 (0-1)	800-AB	800-CB	800-BB
0-30 (0-2)	800-AC	800-CC	800-BC
0-60 (0-4)	800-AD	800-CD	800-BD
0-100 (0-7)	800-AE	800-CE	800-BE

Type 850/860/870

Air/Water/Potable Water regulator provides stable output pressure in a small, economical package.

- Relieving and non-relieving models
- Non-rising adjustment knob with locking capability
- Lightweight construction
- OEM friendly cost
- 1/8" and 1/4" NPT and BSP Porting
- Food grade compliant (870 only)

Minature Air/Water/Potable Water Pressure Regulator

Flow Capacity SCFM (Nl/min) [gal/min]	24 (720) [2.4]
T850 Exhaust Capacity SCFM (Nl/min)	.5 (15)
T850 Supply Pressure Max PSIG (BAR)	250 (17)
T860 Supply Pressure Max PSIG (BAR)	150 (10)
Approximate Size (inches)	1.5 x 1.63 x 2.80
Approximate Size (mm)	38.1 x 41.4 x 71.1

Range PSIG (BAR)	Port Size NPT	Air Model# NPT	Water Model# NPT	Potable Model# NPT
0-5 (0-0.4)	1/8	850-AE	860-AEN	870-AEN
	1/4	850-BE	860-BEN	870-BEN
0-15 (0-1)	1/8	850-AA	860-AAN	870-AAN
	1/4	850-BA	860-BAN	870-BAN
0-30 (0-2)	1/8	850-AB	860-ABN	870-ABN
	1/4	850-BB	860-BBN	870-BBN
0-60 (0-4)	1/8	850-AC	860-ACN	870-ACN
	1/4	850-BC	860-BCN	870-BCN
0-100 (0-7)	1/8	850-AD	860-ADN	870-ADN
	1/4	850-BD	860-BDN	870-BDN

For BSP porting add "U" to end of Model #

Intrinsically Safe – I/P, E/P

Type 500X

This electronic pressure regulator converts a current or voltage input signal to a linearly proportional pneumatic output pressure.

- Output pressure from 3–15 psig to 3–120 psig
- NEMA-4X (IP65) Enclosure (optional)
- Integral volume booster
- Agency approvals
- Field reversible
- Easy span and zero adjustment

Also Available:

Type 500X High Pressure Range

Flow Capacity SCFM (Nl/min)	20 (600)
Terminal Based Linearity (% of span)	±1.5
Supply Pressure Max PSIG (BAR)	150 (10)

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	2-60 (0.14-4)	500-AG/500-AGU
4-20 mA	3-120 (0.2-8)	500-AH/500-AHU
0-60 mA	2-120 (0.14-8)	500-BF/500-BFU
0-5 V	2-60 (0.14-4)	500-CF/500-CFU
0-10 V	3-120 (0.2-8)	500-EH/500-EHU

Transducer (I/P, E/P)

Flow Capacity SCFM (Nl/min)	12.0 (360)
Terminal Based Linearity (% of span)	±0.75
Repeatability (% of span)	<0.5
Supply Pressure Max PSIG (BAR)	100 (7)
Port Size (Pneumatic)	1/4 NPT, 1/4 BSP
Port Size (Electric)	1/2 NPT
Approximate Size (inches)	2.18 x 2.18 x 4.24
Approximate Size (mm)	55.4 x 55.4 x 107.7

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	3-15 (0.2-1)	500-AC/500-ACU
4-20 mA	3-27 (0.2-1.8)	500-AD/500-ADU
4-20 mA	6-30 (0.4-2)	500-AE/500-AEU
4-20 mA	1-17 (0.07-1.2)	500-AF/500-AFU
10-50 mA	3-15 (0.2-1)	500-BC/500-BCU
10-50 mA	3-27 (0.2-1.8)	500-BD/500-BDU
10-50 mA	6-30 (0.4-2)	500-BE/500-BEU
0-5 V	3-15 (0.2-1)	500-CC/500-CCU
0-5 V	3-27 (0.2-1.8)	500-CD/500-CDU
0-5 V	6-30 (0.4-2)	500-CE/500-CEU
1-9 V	3-15 (0.2-1)	500-DC/500-DCU
1-9 V	3-27 (0.2-1.8)	500-DD/500-DDU
1-9 V	6-30 (0.4-2)	500-DE/500-DEU

Type 590X

I/P transducer uses open loop control and a low mass magnet to produce accurate pressure control at an economical cost. Position insensitive and impervious to RFI/EMI interference.

- Vibration and position insensitive
- Din rail and manifold mounting
- Manifold or 1/8" NPT porting available
- Wide operating temperature limits
- Worldwide safety approvals

Transducer (I/P)

Terminal Based Linearity (% of span)	±0.5
Supply Pressure Max PSIG (BAR)	
Manifold (M)	150 (10.0)
1/8" NPT (P)	3-15: 22 (1.5) 3-27, 6-30: 42 (2.8)
Approximate Size (inches)	3.3 x 1.4 x 2.0
Approximate Size (mm)	84.9 x 36.1 x 53.1

Input Signal	Output Range PSI (BAR)	Connection	Model#
4-20 mA	3-15 (0.2-1)	Manifold	590-ACM
4-20 mA	3-27 (0.2-1.8)	Manifold	590-ADM
4-20 mA	6-30 (0.4-2)	Manifold	590-AEM
4-20 mA	3-15 (0.2-1)	1/8" NPT	590-ACP
4-20 mA	3-27 (0.2-1.8)	1/8" NPT	590-ADP
4-20 mA	6-30 (0.4-2)	1/8" NPT	590-AEP

Type 900X

Internal feedback system provides accurate conversion of a variable electrical signal to a linearly proportional pneumatic output.

- Unit self-corrects to maintain precise control of output pressure
- Shock, vibration and position insensitive
- High accuracy
- Noninteractive zero and span
- Wall, panel, pipe, DIN rail (optional) or manifold mounting
- DIN 43650, terminal block or conduit electrical connections
- NEMA-4X(IP65) Enclosure
- Supply pressures up to 130 PSIG
- Built-in volume booster
- Direct / reverse acting, full / split range

Also Available:

Type 900X High Output

Inputs:	4-20 mA, 0-10 VDC, 1-9 VDC, 0-5 VDC, 1-5 VDC
Outputs PSIG (BAR):	2-60 (0.14-4), 2-100 (0.14-6.9)
Supply Pressure PSIG (BAR):	65-130 (4.5-9), 105-130 (7.2-9)
Air Consumption:	4.5 scfh (2.25 NL/min) at mid range typical
Flow Capacity:	20 scfm (566 NL/min) at 130 psig (9.0 BAR) supply

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	2-60 (0.14-4)	900-AGA/900-AGAU
4-20 mA	2-100 (0.14-7)	900-AHA/900-AHAU
0-10 VDC	2-60 (0.14-4)	900-EGA/900-EGAU
0-10 VDC	2-100 (0.14-7)	900-EHA/900-EHAU

Transducer (I/P, E/P)

Inputs	4-20 mA, 0-5 VDC, 1-9 VDC, 0-10 VDC, 1-5 VDC
Flow Capacity SCFM (Nl/min)	12.0 (360)
Terminal Based Linearity (% of span)	±0.10
Repeatability (% of span)	<0.10
Supply Pressure Max PSIG (BAR)	100 (7)
Port Size (Pneumatic)	1/4 NPT, 1/4 BSP
Port Size (Electric)	1/2 NPT
Approximate Size (inches)	1.5 x 2.2 x 3.7
Approximate Size (mm)	38.1 x 55.9 x 93.7

Input Signal	Output Range PSI (BAR)	Model# NPT
4-20 mA	3-15 (0.20-1.00)	900-ACA/900-ACAU
4-20 mA	3-27 (0.2-1.9)	900-ADA/900-ADAU
4-20 mA	6-30 (0.4-2.1)	900-AEA/900-AEAU
4-20 mA	1-17 (0.07-1.2)	900-AFA/900-AFAU
0-10 VDC	3-15 (0.20-1.00	900-ECA/900-ECAU
0-10 VDC	3-27 (0.2-1.9)	900-EDA/900-EDAU
0-10 VDC	6-30 (0.4-2.1)	900-EEA/900-EEAU
0-10 VDC	1-17 (0.07-1.2)	900-EFA/900-EFAU

Also Available:

Type 900X Zero Based

Inputs:	4-20 mA, 0-10 VDC, 1-9 VDC, 0-5 VDC, 1-5 VDC
Outputs PSIG (BAR):	0-15 (0-1.0), 0-30 (0-2.1), 0-60 (0-4.1)
Supply Pressure PSIG (BAR):	25-65 (1.7-4.5), 40-70 (2.75-4.8), 70-80 (4.8-5.5)
Air Consumption:	1.5 scfh (0.75 NL/min) at mid range typical 4.5 scfh (2.25 NL/min) at mid range typical
Flow Capacity:	4.5 scfm (127 NL/min) at 130 psig (9.0 BAR) supply 20 scfm (566 NL/min) at 130 psig (9.0 BAR) supply

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	0-15 (0-1)	900-ALA/900-ALAU
4-20 mA	0-30 (0-2.1)	900-AIA/900-AIAU
4-20 mA	0-60 (0-4.1)	900-AJA/900-AJAU
0-10 VDC	0-15 (0-1)	900-ELA/900-ELAU
0-10 VDC	0-30 (0-2.1)	900-EIA/900-EIAU
0-10 VDC	0-60 (0-4.1)	900-EJA/900-EJAU

Type 550X

This electronic regulator provides accurate and economic control for proportional pressure applications.

- Compact size, accessible porting and easy adjustments for space constrained applications
- DIN 43650, terminal block or conduit electrical connections
- DIN rail, mainifold, pipe, wall or panel mounting available
- NEMA-4X(IP65) housing
- Zero based and high pressure versions available

Transducer (I/P, E/P)

Inputs	4-20 mA, 0-5 VDC, 0-10 VDC, 1-9 VDC
Flow Capacity SCFM (Nl/min)	12.0 (360)
Linearity (Independent) % of span	<±0.5
Repeatability % of span	<0.5
Supply Pressure Max PSIG (BAR)	100 (7)
Port Size (Pneumatic)	1/4 NPT, 1/4 BSP
Approximate Size (inches)	1.5 x 2.2 x 3.7
Approximate Size (mm)	38.1 x 55.4 x 93.7

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	3-15 (0.2-1)	550-ACA/550-ACAU
4-20 mA	3-27 (0.2-1.8)	550-ADA/550-ADAU
4-20 mA	6-30 (0.4-2)	550-AEA/550-AEAU
4-20 mA	2-60 (0)	550-AGA/550-AGAU
4-20 mA	3-120 (0)	550-AHA/550-AHAU
0-10 V	2-60 (0)	550-EGA/550-EGAU
010 V	3-120 (0)	550-EHA/550-EHAU

Also Available:

Type 550X Zero Based Range

Inputs	4-20 mA, 0-5 VDC, 0-10 VDC, 1-9 VDC
Max. Flow Capacity SCFM (Nl/min)	20 (600)
Linearity (Independent) % of span	<±1.0
Repeatability % of span	<1.0
Supply Pressure Max PSIG (BAR)	150 (1050)
Port Size (Pneumatic)	1/4 NPT
Approximate Size (inches)	1.5 x 2.2 x 5.1
Approximate Size (mm)	38.1 x 55.4 x 130

Input Signal	Output Range PSI (BAR)	Model# NPT/BSP
4-20 mA	0-30 (0)	550-AIA/550-AIAU
4-20 mA	0-60 (0)	550-AJA/550-AJAU
4-20 mA	0-120 (0)	550-AKA/550-AKAU
0-10 V	0-30 (0)	550-EIA/550-EIAU
010 V	0-60 (0)	550-EJA/550-EJAU
010 V	0-120 (0)	550-EKA/550-EKAU

Explosion-Proof – I/P

Type 595XP

Explosion-Proof Transducer (I/P)

Converts a 4–20mA electrical current signal to a proportionally linear pneumatic output utilizing open loop control to provide a high level of accuracy and repeatability. Available with an integral volume booster or as a low-flow signal converter.

- Compact design
- Worldwide safety approvals
- Vibration and position insensitive
- Low power consumption

Flow Capacity SCFM (Nl/min)	2.4 (72)	
Terminal Based Linearity (% of span)	±0.5	
Repeatability (% of span)	<0.3	
Supply Pressure Max PSIG (BAR)	42 (2.8)	
Port Size (Pneumatic)	1/4 NPT	
Port Size (Electric)	1/2 NPT	
Approximate Size (inches)	DIA 2.90	H 5.16
Approximate Size (mm)	DIA 73.7	H 131.0

Input Signal	Output Range PSI (BAR)	Model#
4-20 mA	3-15 (0.2-1)	595-AC
4-20 mA	3-27 (0.2-1.8)	595-AD
4-20 mA	6-30 (0.4-2)	595-AC

Type 950XP

Explosion-Proof Transducer (I/P)

Compact I/P transducer in an explosion-proof housing delivers reliable performance in hazardous areas. Internal electronic feedback system maintains accurate control of output pressure.

- Explosion-proof NEMA-4X(IP65) enclosure.
- RFI, EMI protected
- Shock, vibration and position insensitive.
- Field-selectable outputs (optional)
- Highly tolerant of impure air
- Optional tapped exhaust and conduit seal required for FM/CSA approval when using natural gas (sweet) or methane

Flow Capacity SCFM (Nl/min)	12.0 (360)	
Terminal Based Linearity (% of span)	±0.10	
Repeatability (% of span)	<0.10	
Supply Pressure Max PSIG (BAR)	100 (7)	
Port Size (Pneumatic)	1/4 NPT	
Port Size (Electric)	1/2 NPT	
Approximate Size (inches)	DIA 3.50	H 4.60
Approximate Size (mm)	DIA 88.9	H 116.6

Input Signal	Output Range PSI (BAR)	Model#
4-20 mA	3-15 (0.2-1)	950-AC
4-20 mA	3-27 (0.2-1.8)	950-AD
4-20 mA	6-30 (0.4-2)	950-AE
4-20 mA	Field Selectable	950-ACA
4-20 mA	Explosion-proof	950-ACA

Approved for Natural Gas

I/PAC

Integrated Process Air Control

Explosion-proof field mounted I/P transducers offered as an integrated package, preassembled with a filter regulator and pressure gauge. Choose from different versions of either the Type-950XP or Type-595XP I/P combined with the Type-330 filter regulator. The package is bracketed to mount on a 2" pipe as well as directly onto valve yokes or other devices that utilize 2.25" bolt spacing.

- Seamless replacements for existing automated control valves in the field
- Convenient bracketing allows direct or 2" pipe mounting
- Units come preassembled with filter regulator and pressure gauge.
- Explosion-proof and intrinsically safe approvals from FM, CSA and ATEX

P/I

P200/P290M

Pneumatic-to-Current P/I Transducers

All solid state circuitry converts standard 3-15, 3-27 or 6-30 psig instrument air into 4-20 or 10-50 mA outputs (4-20 mA only for FM and CSA approval) with uncompromising accuracy and durability. The P200 is FM approved and CSA certified as NEMA 4 (Enc. 4) for all locations and explosion-proof.

P200

P290M

- ±0.15% accuracy
- Custom inputs up to 30 PSI

	Dahl P200	Dahl P290
Inputs	3-15 psig (0.2-1 BAR), 3-27 psig (0.2-1.8 BAR), 6-30 psig (0.4-2 BAR) or customized up to 0-30 psig (0-2 BAR)	
Outputs	2 wire: 4-20 mA and 10-50 mA with over-current limit	2 wire: 4-20 mA, with over-current limit
Loads (24 VDC)	700 Ω	2-wire: 700 Ω, standard.
Accuracy	± 0.15% of span; ±0.10% of span typical. Includes combined effects of linearity, hysteresis and repeatability errors	
Temp. Stability	Span and zero: ± 0.007% of span per °F maximum deviation from 77°F calibration	
Approx. Size (inches)	3.5 x 3.125	.75 x 3.43 x 5.37

Input Signal PSI (BAR)	Output Range	Model#
3-15 (0.2-1)	4-20 mA	P200 + P11
3-27 (0.2-1.8)	4-20 mA	P200 + P12
6-30 (0.4-2)	4-20 mA	P200 + P13
3-15 (0.2-1)	4-20 mA	P290M + P11
3-27 (0.2-1.8)	4-20 mA	P290M + P12
6-30 (0.4-2)	4-20 mA	P290M + P13

Liquid Level Measuring System

L100

Bubble Tube Liquid Level System

Fully self-contained bubble-tube level system requires only connections to air or gas supply, dip tube and electrical power source to provide precise level indication.

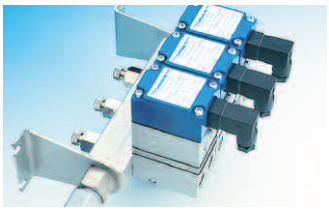
- High accuracy and stability
- Visual purge rate indication
- Blow-down capability
- Excellent for hazardous, high-temp., corrosive or waste water
- NEMA 4X enclosures available

Description	Model#
Basic System	L100
Remote Sensing	L100R
Automatic Blow-Down	L100A
Remote Sensing & Automatic Blow-Down	L100AR

Manifold

Type 925

Multi-Function Supply Manifold



Provides a common supply port for the Type 550 or Type 900X I/P, E/P. Individual shut-offs allow in use service.

- One supply line for multiple outlets
- Patented individual shut-off valve
- DIN rail mountable
- Easy set-up
- Adaptable to provide common output for solenoid valves

Volume Boosters & Air Relays

Type 200

Pilot operated, multi-stage 1:1 relay with positive and negative biasing adjustment capability. It accurately and quickly reproduces a signal pressure with consistent repeatability.

- Output control to within 0.1% of full range
- Positive or negative bias up to 30 psig
- High relief capacity model available
- Compact unit
- Available with external bias adjustment (shown)

Precision Air Relay

Flow Capacity SCFM (Nl/min)	14 (420)
Exhaust Capacity SCFM (Nl/min)	
Standard Relief	2.0 (60)
High Relief Capacity	10 (300)
Sensitivity Inch wc (mm)	0.125 (3.2)
Supply Pressure Max PSIG (BAR)	150 (10)
Output Pressure Range PSIG (BAR)	2-120 (0.14-8)
Approximate Size (inches)	2.06 x 2.06 x 2.88
Approximate Size (mm)	52 x 52 x 73

Port Size NPT/BSP	Max. Output Pressure PSIG (BAR) NPT/BSP	Model #
Standard Relief		
1/4	2-120 (0.14-8)	200-BC/200-BCU
3/8	2-120 (0.14-8)	200-CC/200-CCU
High Relief Capacity		
1/4	2-120 (0.14-8)	210-BC/210-BCU
3/8	2-120 (0.14-8)	210-CC/210-CCU

Type 250

Valve or damper position is maintained by capturing air pressure inside the diaphragm chamber (or piston cylinder) of the actuator, when the supply pressure falls below the desired set value.

- Two pressure ranges 15-60 psig (1-4 BAR) or 30-120 psig (2-8 BAR)
- Manual relief valve
- Corrosion-resistance construction
- Aluminum or stainless steel material option
- No leakage in lock-up position

Lock-up Air Relay

Cut-off Pressure Range PSIG (BAR)	15-60 (1-4)
Supply Pressure Max PSIG (BAR)	125 (8.35)
Temperature Limits:	0° to 160°F (-18° to 71°C)
Port Size NPT	1/4"

Set Point Range PSIG (BAR)	Part Number	Construction
15-60 (1-4)	250-AA	Aluminum
30-120 (2-8)	250-BA	Aluminum
15-60 (1-4)	250-AS	Stainless Steel
30-120 (2-8)	250-BS	Stainless Steel

Type 600

Utilizes a signal pressure to produce an output pressure with high flow capacity. Highly resistant to output variation due to changing flow and supply pressure conditions.

- Flow capacity to 50 SCFM
- Available with 1:1, 1:2, 1:3 or 1:6 signal to output ratio
- High relief capacity
- Negative bias option available

Volume Booster

Flow Capacity SCFM (Nl/min)	50 (1,500)
Exhaust Capacity SCFM (Nl/min)	15.0 (450)
Sensitivity Inch wc (mm)	0.25 (6.4)
Supply Pressure Max PSIG (BAR)	250 (17)
Output Pressure Range PSIG (BAR)	0-150 (0-10)
Approximate Size (inches)	DIA 3.0 H 3.5
Approximate Size (mm)	DIA 76 H 85

Port Size NPT/BSP	Signal/ Output Ratio	Model# NPT
1/4", 3/8", 1/2"	1:1	600-BA, 600-CA, 600-DA
1/4", 3/8", 1/2"	1:2	600-BB, 600-CB, 600-DB
1/4", 3/8", 1/2"	1:3	600-BC, 600-CC, 600-DC
1/4", 3/8", 1/2"	1:6	600-BD, 600-CD, 600-DD

For BSP porting add "U" to end of Model#

Type 650

Signal-operated regulator provides an output pressure that is the sum of the input signal pressure plus an easily adjustable positive bias.

- Four bias ranges from 0–15 psig to 0–150 psig
- Flow capacity to 50 SCFM
- Relief capacity to 15 SCFM

Positive Bias Relay

Flow Capacity SCFM (Nl/min)	50 (1,500)
Exhaust Capacity SCFM (Nl/min)	15.0 (450)
Sensitivity Inch wc (mm)	0.25 (6.4)
Supply Pressure Max PSIG (BAR)	250 (17)
Output Pressure Range PSIG (BAR)	0-150 (0-10)
Approximate Size (inches)	DIA 3.0 H 3.5
Approximate Size (mm)	DIA 76 H 85

Port Size NPT/BSP	Bias Range PSI (BAR)	Model# NPT/BSP
1/4	0-15 (0-1)	650-BC/650-BCU
1/4	0-30 (0-2)	650-BD/650-BDU
1/4	0-60 (0-4)	650-BE/650-BEU
1/4	0-150 (0-10)	650-BF/650-BFU
3/8	0-15 (0-1)	650-CC/650-CCU
3/8	0-30 (0-2)	650-CD/650-CDU
3/8	0-60 (0-4)	650-CE/650-CEU
3/8	0-150 (0-10)	650-CF/650-CFU

Type 6000

1-to-1 signal to output relay that, when used with a positioner/actuator, increases speed of control valves.

- High air volume for rapid actuator stroking
- Adjustable bypass valve eliminates actuator overshoot or overdamping
- Soft seat sealing for tight shutoff
- Available in aluminum or 316 stainless steel contruction

Volume Booster

Supply & Signal Pressure	150 psig (10 BAR) max
Max Flow Coefficients (Cv)	Supply 3.0 / Exhaust 3.0
Flow Capacity	115 scfm (3,450 Nl/min)
Deadband	Under 0.25 psig (0.017 BAR)
Signal to Output Ratio	1:1 ± 5%
Temperature Limits	-40° to 160°F (-40° to 71°C)
EPDM Option "R"	-40° to 230°F (-40° to 110°C)
Silicone	-60° to 230°F (-51° to 110°C)
Signal Port	1/4" NPT
Supply/Output Port	1/2" or 3/4" NPT

In/Out Port	Construction	Model #
1/2" NPT	Aluminum	6000-DA
3/4" NPT	Aluminum	6000-EA
1/2" NPT	Stainless Steel	6000-DS
3/4" NPT	Stainless Steel	6000-ES

Type 6500/6600

1:1 signal to output relays utilized in high flow applications. Suitable for either diaphragm or piston actuators. Fixed deadband and adjustable bypass valve allow incremental downstream adjustment without opening the main booster valve.

- Aluminum or 316 stainless Ssteel construction
- ¾" or 1" NPT porting
- Integral adjustable bypass valve
- High temperature option
- Soft valve seat design
- Tapped high output exhaust port
- 2 gauge ports - optional output feedback port

Large Flow Capacity Volume Booster

Signal/Output Ratio	1:1
Supply Pressure	250 psig (17.0 BAR) Maximum
Signal Pressure	150 psig (10.0 BAR) Maximum
Maximum Flow Coefficients:	3/4"-Forward: 6.0; Exhaust 5.0 1"-Forward: 7.0; Exhaust 5.0
Flow Capacity:	3/4"-350 scfm (9,905 NL/min); 1"-400 scfm (11,320 NL/min) 100 psig (7 BAR) supply, 20 psig (1.4 BAR) output
Signal to Output	2.0% (% of 100 psi output span)
Ratio Accuracy:	1.5% (% of 15 psi output span)
Temperature Limits	-40 to 200°F (-40 to 93°C)
Deadband	Under 0.2 psig (.01 BAR)
Suppy Pressure Effect	0.3 psig (.02 BAR)

In/Out Port	Construction	Model #
3/4" NPT	Aluminum	6500-EA
1" NPT	Aluminum	6500-FA
3/4" NPT	Stainless Steel	6600-ES
1" NPT	Stainless Steel	6600-FS

Mite 70/73/74/85

Precise control of air or gas service. Their snap-acting design automatically trips on either an increasing or decreasing signal. Mites are rugged, compact units engineered for high density applications. They are constructed to last and "make decisions" with crisp precision, cycle after cycle.

Snap-acting Control Relay with Manual Reset

Pressure Rating	100 psig max
Temperature Limits	-40°F to +180°F
Port Sizes	Tapped for 1/4" NPT with 1/8" internal ports
Materials	Aluminum, plated steel, neoprene, brass and stainless steel

Super Mite 71L/71H

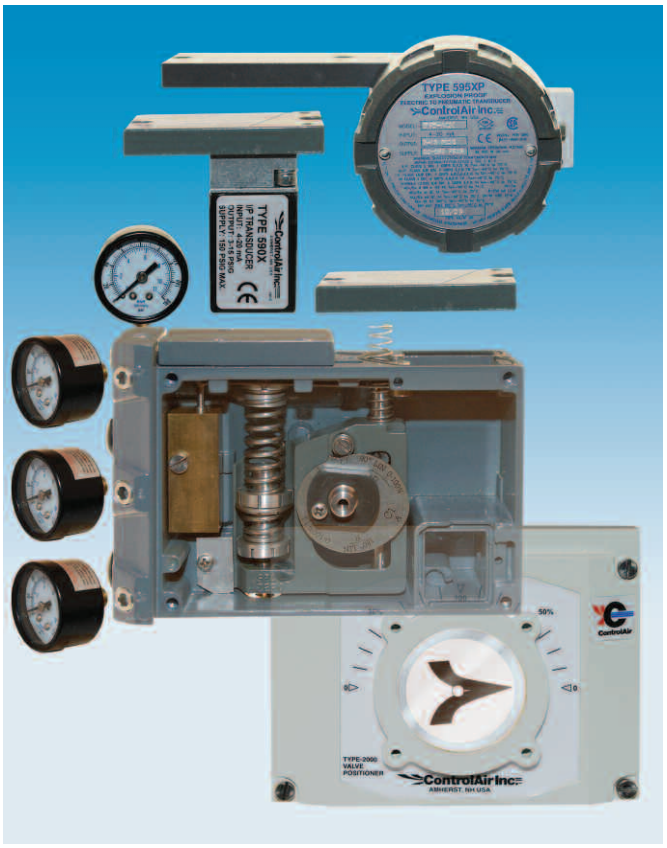
Automatically selects the higher or lower of two pneumatic inputs and passes it downstream while blocking the other. Capable of almost instantaneous selection, and can separate pressure differentials as low as a tenth of a psi.

High Pass or Low Pass Pneumatic Selecting Relay

Pressure Rating	100 psig max
Temperature Limits	-40°F to +180°F
Port Sizes	Tapped for 1/4" NPT with 1/8" internal ports
Materials	Aluminum, plated steel, neoprene, brass and stainless steel

Valve Positioner

Type 2000



The ControlAir Type-2000 pneumatic and electro-pneumatic positioner provides stable and accurate positioning of rotary and linear valves. The force balanced instrument is simple, reliable and user friendly for calibration, maintenance and field upgrades. The electro-pneumatic unit is available with worldwide safety approvals in an Intrinsically Safe and Explosion-proof version. The NEMA-4X (IP 66) housing provides rugged resistance to severe industrial environments. The modular design of the Type-2000 allows multiple feature ordering options or easy field conversions.

Pneumatic and Electro-Pneumatic Valve Positioner

- **Modular construction**
  Base pneumatic unit can be quickly field converted to a fully optioned electro-pneumatic unit.
- **Rotary and linear, single and double acting**
- **External and zero adjustment for easy calibration**
- **Compact design**
  Small size and low weight
- **Vibration, position and shock insensitive**
- **Single piece spindle**
  Minimizes long-term spindle wear
- **Stainless steel spool valve**
  Long operating life
- **High gain pilot valve**
  Provides quick and accurate valve/actuator response
- **Standard pointed indicator (rotary), standard blank cover (linear) and optional raised beacon**
- **High maximum supply pressure 145 psig (10 Bar)**
- **FM, CSA & ATEX approvals**
  For Intrinsically Safe (CA2010/CA2011) and Explosion-proof (CA2020/CA2021) operation

Functional Specifications

Type-2000	Pneumatic (CA2000)	Electro-Pneumatic Intrinsically Safe (CA2010/CA2011)	Electro-Pneumatic Explosion-proof (CA2020/CA2011)
Input Signal	3-15 PSI (0.2-1.0 Bar)	4-20 mA (Ri<250 ohms)	
Supply Pressure	<145 PSI (<10 Bar)	21.8-145 PSI (1.5-10 Bar)	
Linearity Error	<0.7 % f.s	<1.0% f.s	
Hysteresis	<0.4% f.s	<0.6% f.s	
Repeatability	<0.3% f.s	<0.5% f.s	
Pressure Gain	750 P out/P in	750 P out/P in	
Flow Capacity	SCFM (Nl/min)	SCFM (Nl/min)	
@29 PSI (2.0 BAR)	9.5(268.9)	9.5(268.9)	
@87 PSI (6.0 BAR)	28.3 (800.1)	28.3 (800.1)	
@145 PSI (10 BAR)	47.1 (1333)	47.1 (1333)	
Air Consumption	SCFM (Nl/min)	SCFM (Nl/min)	
@29 PSI (2.0 BAR)	0.18 (5.09)	0.2 (5.7)	
@87 PSI (6.0 BAR)	0.53 (424.5)	0.6 (17.0)	
@145 PSI (10 BAR)	0.88 (707.5)	1.0 (28.3)	
Impedance		260 Ohms @ 70°	
Loop Load		5.2 Volts @ 70°F	

Physical Specifications

Temperature Range	-40° to 185° F (-40° to 85° C)		
Port Sizes	Pneumatic: 1/4" NPT; Gauge Ports - 1/8" NPT Electric: 1/2" NPT; M20-1.5 (ATEX)		
Media	Clean, dry, oil-free instrument air, filtered to 40 micron		
Enclosure	Nema 4X / IP66		
Finish	Polyester Epoxy		
Weight	3.5 lbs (1.6 kg)	3.8 lbs (1.7 kg)	4.8 lbs (2.2 kg)

Model **CA20 -** ☐ - ☐ - ☐ - ☐ - ☐

Type of Positioner
- **00** P/P Pneumatic
- **10** E/P Electro-pneumatic; FM/CSA Intrinsically Safe
- **11** E/P Electro-pneumatic; ATEX Intrinsically Safe
- **20** E/P Electro-pneumatic; FM/CSA Explosion-proof
- **21** E/P Electro-pneumatic; ATEX Flame-proof

Type of Motion
- **R** Rotary
- **L** Linear

Spindle
- **0** Namur (Rotary)
- **1** Standard (Linear)
- **2** 3/8" Square
- **3** 1/2" Square

Cam
- **C1** 90°/180° (Standard Rotary)
- **C2** 45°/90°
- **C3** 30°/60° (Standard Linear)

Indicator
- **N** None (Standard Linear)
- **A** Arrow (Standard Rotary)
- **D** Dome (Option)

Diaphragm Air Cylinders

A rolling diaphragm provides a low-friction dynamic seal. This design provides virtually frictionless conversion of fluid pressure to linear force.

- Low hysteresis
- No blow-by leakage
- Foot & clevis mounts
- Singel acting & double acting optional
- Ultra cylinders available with linear ball bearings
- Standard units are easily modified to meet individual customer requirements

ControlAir delivers precision pneumatic and electropneumatic controls to critical industries around the world.

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