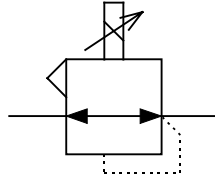


# TYPE 425 FAILSAFE ELECTRONIC CONVERTER CURRENT TO PRESSURE (I/P)

## FEATURES

- Advanced electronic control
- Explosion proof
- Failsafe operation (output pressure falls to minimum on power failure)
- Vibration immune
- Weatherproof



Functional Symbol



## GENERAL DESCRIPTION

The 425 proportional I/P converter uses advanced closed loop electronic control to achieve accurate, high resolution pressure control. It is available in explosion proof and intrinsically safe versions and its vibration immunity and weatherproofing make it ideal for field application.

## TECHNICAL DATA

### Pneumatic

- Output Signal 0.2-1bar (3-15psig) ; minimum outlet pressure less than 15mbar (0.2psig)
- Air Supply Oil free, dry air, filtered to 5 microns; 1.3-4bar (18-60psig)
- Flow Capacity Up to 300NI/min (10scfm)
- Air Consumption 0.6 l/min (0.02scfm) typical
- Response Time 5 seconds (from 0 to 90% or 100 to 10% of output pressure into a 0.5 litre load)
- Total Error  $\pm 0.25\%$  of span (typical, independent error includes the combined effect of non-linearity, hysteresis, deadzone and repeatability)
- Temperature Effect Typically less than  $\pm 1\%$  span between  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- Supply Sensitivity Less than 1% span for 10% supply pressure change
- Connections  $1/4"$  NPT female standard (plus two integral  $1/4"$  NPT gauge ports)

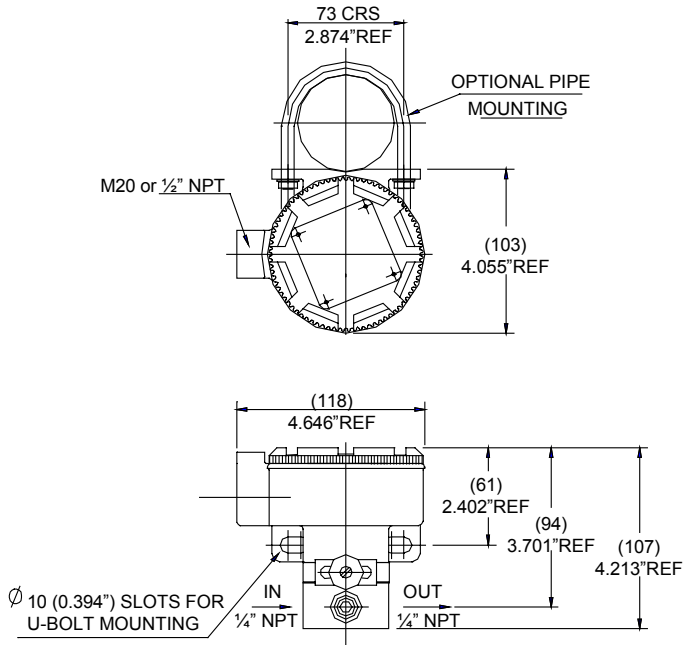
### Physical

- Operating Temperature  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Weatherproofing IP66, NEMA 4X (when mounted upright)
- Vibration Output pressure changes less than 1% for vibration amplitude 5mm 10-30Hz, 10g 30-500Hz
- Electromagnetic Compatibility Compliant and CE marked in accordance with the EC E.M.C directive. Tested to standards: BS EN50082-2: 1995, BS EN50081-2: 1994
- Material of Construction Aluminium and zinc diecasting with nitrile diaphragms, black epoxy powder coating standard
- Mass 930g
- Mounting Position Integral bracket allows for surface or 50mm pipe mounting in any orientation.  
**Note:** The unit must be mounted upright to achieve the weatherproof ratings

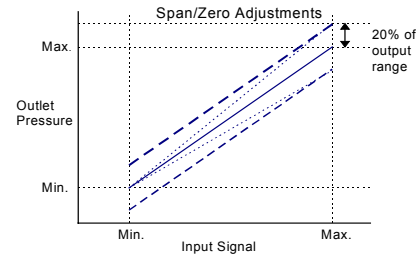
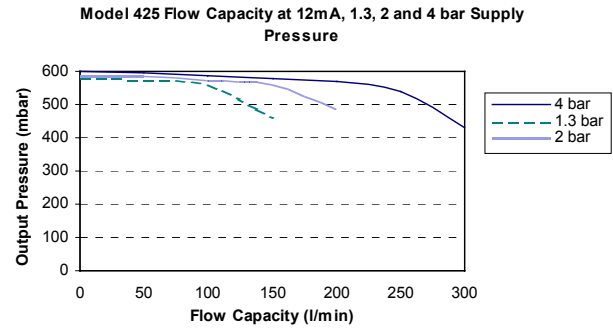
### Electrical

- Electrical Signal 4-20mA (two wire); load presents 6 volts ( $\pm 0.5\text{V}$ ) constant voltage drop to the current source
- Failure Mode Signal falls to below 15mbar (0.2psig) when input signal fails
- Tight Shut-off A potentiometer setting causes the output to fall to zero at between 3.2 and 4.5mA
- Connections  $1/2"$  NPT or M20 female; internal terminal block with capacity up to  $2.5\text{mm}^2$  cable

## Installation Diagrams



## Characteristic Graphs



## Ordering Information

CERTIFICATION	OUTPUT PRESSURE	ORDER CODE		
		Standard	Intrinsically Safe	Explosion/ Flame Proof
NONE	0.2-1bar		-	-
	3-15psig	AF0101	-	-
FACTORY MUTUAL (1/2" NPT)	0.2-1bar	-	AF2121	AF2111
	3-15psig	-	-	AF0111

Standard Models:  
Conduit entry 1/2" NPT

Options to special order:  
Alternative pressure ranges  
Alternative conduit entry  
Dual and Triple certification

## Certification

CERTIFICATION AGENCY	EXPLOSION PROOF/ FLAME PROOF	INTRINSICALLY SAFE	NON-INCENDIVE
FACTORY MUTUAL	Class I, Division I, Groups B, C and D; T6 ambient 75°C, T5 ambient 85°C	Class I, Division I, Groups A, B, C and D; T4 ambient 40°C, T3B ambient 70°C, T3A ambient 85°C	Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; Class III, Division 2; T4 ambient 40°C, T3B ambient 70°C, T3A ambient 85°C
CSA	Class I, Groups B, C and D; Class II, Groups E, F and G; Class III; T6 @ 75°C, T5 @ 85°C	Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III; T4 @ 40°C, T3B @ 70°C, T3A @ 85°C	Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups E, F and G; Class III; T6 @ 75°C, T5 @ 85°C N.B: Only Available as dual IS/NI Certified

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