

COMPACT ELECTRONIC CONVERTER CURRENT TO PRESSURE (I/P) TYPE 421 FAILSAFE MANIFOLD OR RAIL MOUNT

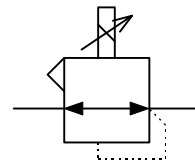
FEATURES

- Advanced electronic control
- High density rail or manifold mount
- Failsafe operation (output pressure falls to minimum on power failure)
- Vibration immune

GENERAL DESCRIPTION

The 421 proportional I/P converter uses advanced electronic control to achieve outstanding performance. It is highly reliable with long life, is free from the effects of vibration and its high density mounting capability makes it ideal for control room applications.

The manifold system, usually surface mounted, allows several converters to be connected to a single air supply and is available in different lengths



Functional Symbol

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; 1.5-3.5bar (20-50psig) or at least 0.7bar above maximum output pressure
- Flow Capacity Up to 150NI/min (5scfm)
- Air Consumption 0.2 l/min typical low pressure (0.007scfm)
- Response Time 5 seconds (10 to 90% or 90 to 10% of output pressure into a 5 litre load)
- Total Error $\pm 0.5\%$ of span (typical, independent error includes the combined effect of non-linearity, hysteresis, deadzone and repeatability)
- Temperature Effect Typically less than 1% span for span and zero between 0°C and 50°C
- Supply Sensitivity Maximum of $\pm 2\%$ of outlet pressure at extremes of supply range
- Connections 1/8" NPT female

MANIFOLD

- Materials Aluminium extrusion, clear anodised nitrile 'O' ring seals
- Port Sizes Supply and output 1/4" NPT

PHYSICAL

- Operating Temperature -10°C to +60°C
- I.P. Rating IP40
- Vibration The unit possesses a high degree of immunity
- 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 Anodised natural aluminium
- Mass 600g
- Mounting Position The instrument can be mounted in any orientation. A rail clip is provided with each instrument for TS32 EN50035/TS35 (EN50022) rail.

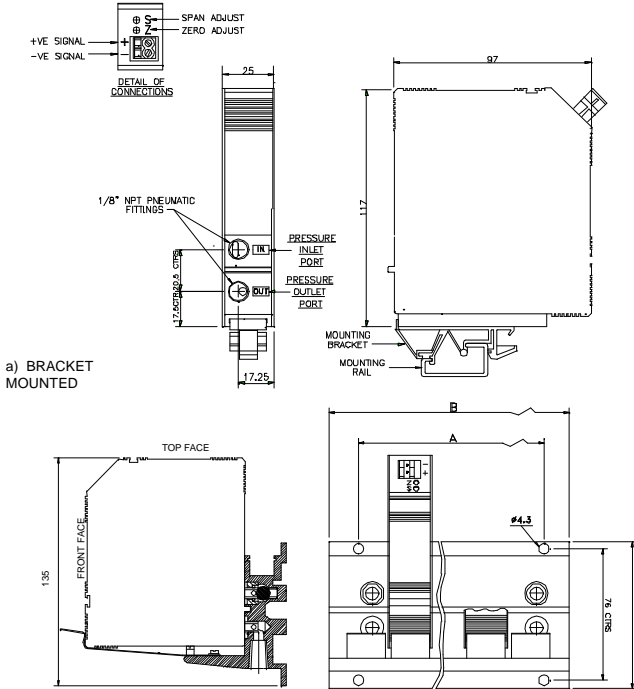
ELECTRICAL

- Electrical Signal 4-20mA (two wire); load presents 10 volts ($\pm 0.5V$) constant voltage drop to the current source
- Failure Mode Signal falls to below 15mbar (0.2psig) when input signal fails
- Connections Two part quick release terminal block with capacity up to 2.5mm² cable

- Proof Pressure 10bar (150psig); pressure should be regulated to converter requirements. **WARNING:** maximum pressure should not be exceeded for safety reasons

Note: it is recommended that an appropriate filter-regulator be fitted to supply all converters

INSTALLATION DIAGRAM

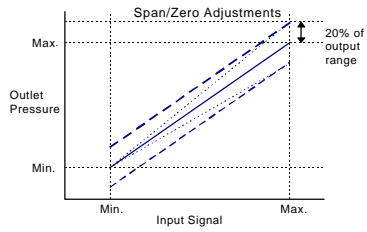


a) BRACKET MOUNTED

b) MANIFOLD MOUNTED

No. OF PORTS	5	10	15	20
A	74	204	334	464
B	147.5	277.5	407.5	537.5

CHARACTERISTIC GRAPHS



ORDERING INFORMATION

Standard Models: 4-20mA input, forward action, terminal connector

421	OUTPUT PRESSURE	ORDER CODE
	0.2-1bar	53AB2100
	3-15psig	53AB0100
MANIFOLD	NUMBER OF PORTS	ORDER CODE
	5	53AA005X
	10	53AA002X
	15	53AA003X
	20	53AA004X
Adapter Kit (1 required per converter)		53AA000X

Options to special order:

- Alternative pressure ranges
- Surface mounting bracket
- Manifold kit for up to 20 converters

CERTIFICATION

All instruments are tested on the Watson Smith Automatic Testing System and an individual test certificate is provided at no extra charge. Each unit is tested for linearity, hysteresis, total error, settling error, over pressure, air consumption, response time, calibration, insulation, start-up current, drop out current, supply sensitivity and voltage load.

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