



Pressure &

Vacuum Measurement Solutions

WWW.MKSINST.COM

120AA

HIGH-ACCURACY BARATRON® ABSOLUTE PRESSURE TRANSDUCER

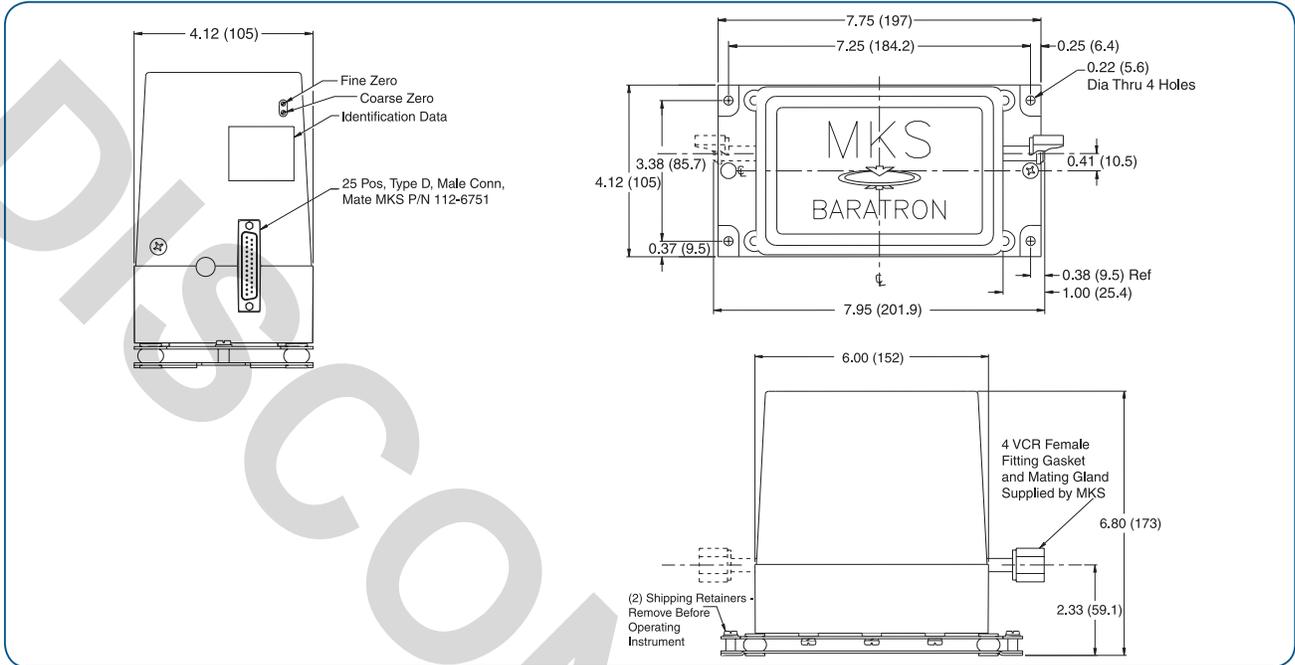
The 120AA is the most accurate stand-alone absolute Baratron® pressure transducer available. Designed for the ever-increasing demands of process technology, the 120AA provides improved accuracy, lower temperature coefficients, and an additional decade of useable measurement range over previously available process transducers. It combines the proven 690 Baratron High Accuracy Sensor and 270 Signal Conditioning Electronics — oscillator, demodulator, and amplifier— within a single, chemically inert, injection-molded, high impact Ryton® enclosure. The compact 120AA Absolute yields a linear, high level 0-10 VDC output signal which can be read directly by a DVM or data acquisition system.

Standard features include a temperature-controlled sensor to 45°C, a remotely activated range turndown capability to provide Full Scale output of 0-10 Volts for 100% and 10% of sensor range, and a remote automatic zeroing capability up to $\pm 2\%$ of Full Scale. Full Scale ranges from 0.1 to 25,000 mmHg are available. The sensor is rugged and its all-welded Inconel® construction offers superior corrosion resistance for use in harsh environments.

Features & Benefits

- Measures total pressure, independent of gas composition
- Remote range turndown (or via the front panel of the 510), to provide 0 -10 VDC for 10% or 100% of Full Scale
- Stand-alone compact transducer package houses sensor and all signal conditioning electronics
- Full five decades of useable measurement range making it ideal for process applications
- Sensor is temperature controlled to 45°C for extremely stable performance and accuracy
- Range change and automatic zeroing capabilities can be remotely activated





Dimensional Drawing —

Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).



Specifications

Sensor Operating Temperature	Heated at 45°C for normal ambient environments
Full Scale Ranges (mmHg psid)	0.1, 1, 10, 100, 1000, 5000, 10,000, 15,000, 20,000, 25,000
Accuracy	
Standard	0.12% of Reading
Optional	0.05%, 0.08% of Reading
Resolution	1 x 10 ⁻⁶ of F.S.
Temperature	45°C
Zero Coefficient/°C	15 ppm
Span Coefficient/°C	100 ppm
Operating Range	15°C to 40°C
Maximum Overpressure	125% of F.S. or 35 psia whichever is larger
Wetted Materials	Inconel, 304 & 316 S.S.
Volume	3.5 cc, 14 cc
Time Response	< 40 msec
Warm-up Time	4 hours
Fittings	
Standard	Swagelok® 4 VCR®-F
Optional	NW 16 KF
Electrical Connector	25-pin Type "D", male
Input Power	±15 or +24 to 30 VDC @ 700 mA on turn-on, 450 mA after warm-up
Output Signal	0 to +10 VDC into >10K load
Range Multiplier	x1 or x0.1 ranges selectable via TTL low or pin grounding
Remote Zero Adjust	Zero adjust initiated via TTL low or pin grounding adjustment range: 2% of F.S.



Ordering Information

Ordering Code Example: 120AA00100RAJ	Code	Configuration
120AA Absolute Pressure Transducer	120AA	120AA
Pressure Range Full Scale (for other engineering units, consult Applications Engineering)		
0.1 mmHg	000.1	00100
1 mmHg	0001	
10 mmHg	00010	
100 mmHg	00100	
1000 mmHg	01000	
5000 mmHg	05000	
10,000 mmHg	10000	
15,000 mmHg	15000	
20,000 mmHg	20000	
25,000 mmHg	25000	
Fittings		
Swagelok® 4 VCR® female	R	R
NW 16 KF (0.1 to 5000 mmHg)	D	
Accuracy (0.05% option available on 1, 10, 100, and 1000 mmHg ranges only)		
Standard: ±0.12% of Rdg	A	A
Optional: ±0.08% of Rdg	B	
Optional: ±0.05% of Rdg	C	
Temperature		
45°	J	J
Other Power Supply Options for 120AA Transducer (Direct Reading)		
651 pressure controller/self-tuning/digital PID (80°C sensor requires high power option)		651C
660 single-channel digital display only		660C
PR4000 two-channel digital power supply/display		PR4000
Cables		
120 to 651, 660, 10 ft. (For cable lengths over 10 ft., consult Applications Engineering.)		RCB120-6-10
120 to PR4000, 10 ft.		RCBE120-96-3M



MKS Instruments, Inc. Global Headquarters

2 Tech Drive, Suite 201
Andover, MA 01810
Tel: 978.645.5500
Tel: 800.227.8766 (in U.S.A.)
Web: www.mksinst.com

MKS Instruments, Inc. Pressure & Vacuum Measurement Solutions

Six Shattuck Road
Andover, MA 01810
Tel: 978.975.2350

120AA - 1/18
© 2006-2018 MKS Instruments, Inc.
All rights reserved.

Some Baratron® capacitance manometer products may not be exported to many end user countries without both US and local government export licenses under ECCN 2B230.

Specifications are subject to change without notice. mksinst™ is a trademark and Baratron® is a registered trademark of MKS Instruments, Inc., Andover, MA. Inconel® is a registered trademark of Inco Alloys International, Huntington, WV. Swagelok® and VCR® are registered trademarks of Swagelok Marketing Co., Solon, OH. Ryton® is a registered trademark of Phillips 66 Co., Pasadena, TX.