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Find the *Brooks Instrument SLA6820V1EGB1A2A1* at our website: *Click HERE*

Data Sheet
DS-PR-SLA6800-PC-eng
November, 2008

Brooks® Delta Class Metal-Sealed Pressure Controllers

Models SLA6810 & SLA6820

General Features:

- Digital software can store 10 selectable calibration and pressure ranges. Spares inventories are reduced by limiting the number of individual PCs required, lowering inventory holding costs.
- Accuracy: ±0.5% F.S., including linearity and hysteresis to assure that the Pressure Controller is controlling precisely at the level it was set for.
- Available with VCR**TM** , CS or C-seal Downport connections - simplifying integration into existing and/or developing tools and systems in the semiconductor industry.
- All-Metal seals, High leak integrity (less than 10-10 atm-cc/sec He)
- Eliminates droop, hysteresis, and boost

DeviceNetTM Communication Option:

- Easy Commissioning and Reduced System-Wiring
- Accessibility of sensor, valve, calibration, tuning and diagnostic data
- MAC-ID, Baudrate rotary switches, and two bi-color status LEDs
- Standard Device-Profile, ODVA Semiconductor-SIG certified
- Capable of: Polled, Bit-Strobe, Cyclic, & Change-of-State messaging

Analog I/O:

- 15-pin
- 0-5 Volt command-setpoint and pressure signals
- Single sided 15 Volt DC power supply
- Separate 'valve-override' signal
- Compatible with Brooks' Model 0150 Series secondary electronics

* Based on data collected determining MTBF for Model 5964 valve and body.



Models SLA6810A/SLA6820A
Analog I/O,
Pressure Controller
VCRs Upstream

Models SLA6810D /SLA6820D
Digital I/O DeviceNet
Pressure Controller Upstream

Analog I/O Pin Connections:

Signal:	15-pin D-conn
Setpoint/Command Common	1
Pressure Signal Out	2
+15V Power	5
-15V(unused)	6
Setpoint/Command Input	8
Power Supply Common	9
Output Signal Common	10
+5V reference	11
Valve Override	12
Calibration Select Pin	13
Chassis Ground	14
No Connections	3, 4, 7, 15

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Brooks® Model SLA6800 PC

DESCRIPTION

Brooks Instrument's Delta Class EM Series metal sealed pressure measurement and control product line offers unparalleled flexibility and performance. The SLA6800 Series EM-family of pressure measurement and control products are the most accurate, repeatable, and responsive controllers on the market today!

Brooks' SLA6800 Series is available with connection to DeviceNet, a high-speed (up to 500k baud) digital communication network adopted by the Semiconductor industry. Brooks' DeviceNet device-profile has been certified by the ODVA (Open DeviceNet Vendors' Association). Other Network protocols are in development, talk to your Brooks' representative about your specific needs.
The process and command data may be 'wired' either using traditional 5 volt analog connections or digital communications networks; The measurement and control performance is the same!
The SLA6800 Series microprocessor uses a multi-point calibration to deal with any residual integral sensor non-linearity, yielding a highly accurate process signal.

The SLA6800 Series family of products utilizes a modular system in both it's mechanical and electrical construction. This modularity allows for simplified customer ordering and factory configuration, enabling Brooks to easily meet the ever changing needs of our global customers. This flexibility yields products for pressure measurement and control, using either traditional analog connections or leading edge network-communication protocols.
Brooks' SLA6800 Series of controllers can directly replace existing analog products with the advantage of improved digital accuracy. Both analog and digital applications will see settling time and accuracy improvements.

Specifications

Performance Characteristics:

Pressure Ratings:
Maximum Pressure: 1450 psia
Transducer Pressure Ratings:
21.75 psia for 0 - 14.5 psia full scale
108.5 psia for 14.5 - 72.5 psia full scale
435 psia for 72.5 -290 psia full scale
Flow Ranges
Models SLA6810 & SLA6820
Any range from 0-3 sccm to 0-30 slpm N_2 equivalent
Control Range
20:1 (can be application dependent)
Accuracy
Integral Pressure products: ±0.5% of F.S. including linearity and hysteresis
Repeatability
Integral Pressure products: ±0.1% of F.S.
Temperature Sensitivity
Integral Pressure products: ±0.1% of F.S. per °C
Zero Stability
Integral Pressure products: ±0.01% of FS per 30 days
Fluid Temperature Limits
0°C to 65°C (32°F to 149°F)
Leak Integrity
Inboard to Outboard: 1x10-10 atm scc/sec Helium max.
Ambient Temperature Limits
Operating: 0°C to 60°C (32°F to 140°F)
Non-operating: -25°C to 100°C (-13°F to 212°F)

Physical Characteristics:

Materials of Construction
316L Vacuum Arc Remelt (VAR), 316L, and high-alloy ferritic stainless steel.
External/internal seals: nickel
Valve seat: 316L stainless steel
Internal wetted Surface Finish 32Ra.
Outline Dimensions
Refer to Figures 2 and 3.
Process Connections
(See Figure 2 for all connection options)

Electrical Characteristics:

Electrical Connections

Analog I/O option: 15-pin, male
Digital I/O DeviceNet option: 5-pin Micro-Connector, male

Power Supply Voltage
Analog I/O option: +15 Vdc, ±5%
(traditional -15 Vdc pin is ignored)
Digital I/O DeviceNet option: nominal = 11-25 Vdc

Power Requirements:

	Watts, typical	Watts, max.
Analog I/O option, with valve:	2.6	4.0
DeviceNet I/O option, with valve:	4.9	7.6

Command-Setpoint Input (Analog option only)
0-5 Vdc: Input will accept signals to 5.5 Vdc (110% F.S.).
Input resistance: 360K ohm min.

Flow or Pressure Output (Analog I/O option only)
0-5 Vdc into 2 K ohm-minimum load.
Output will indicate process-variable up to 6 Vdc(120% F.S.).
Valve Override Signal (Analog I/O option only)
Left floating,unconnected or grounded
– instrument controls valve to command-setpoint
Connected to signal at or above 5.0 Volts
– valve is forced open
Connected to signal at or below 0.0 Volts
– valve is forced closed

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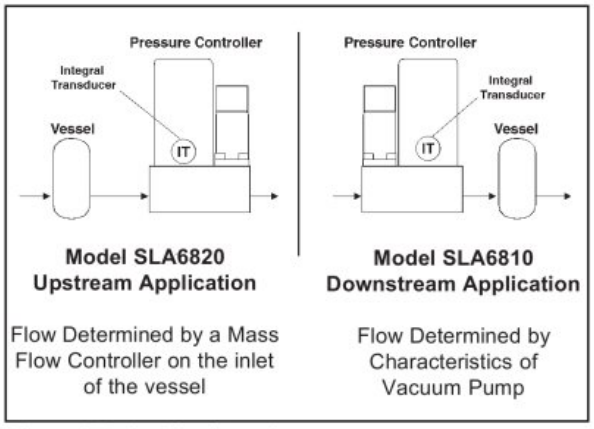


Figure 1 Typical Configurations

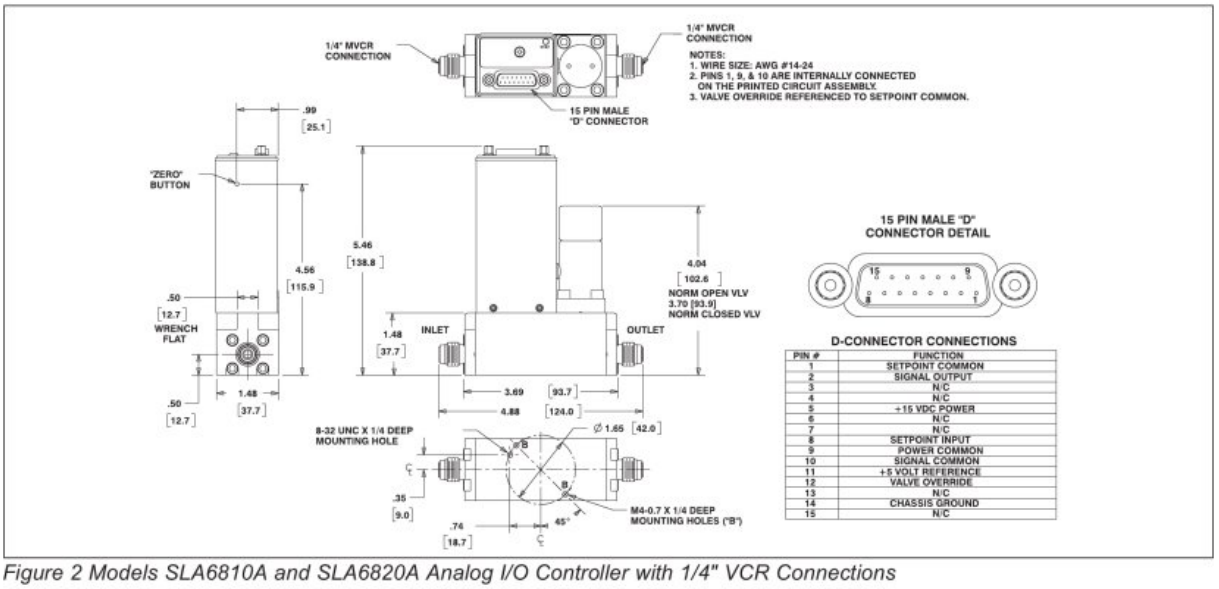


Figure 2 Models SLA6810A and SLA6820A Analog I/O Controller with 1/4" VCR Connections

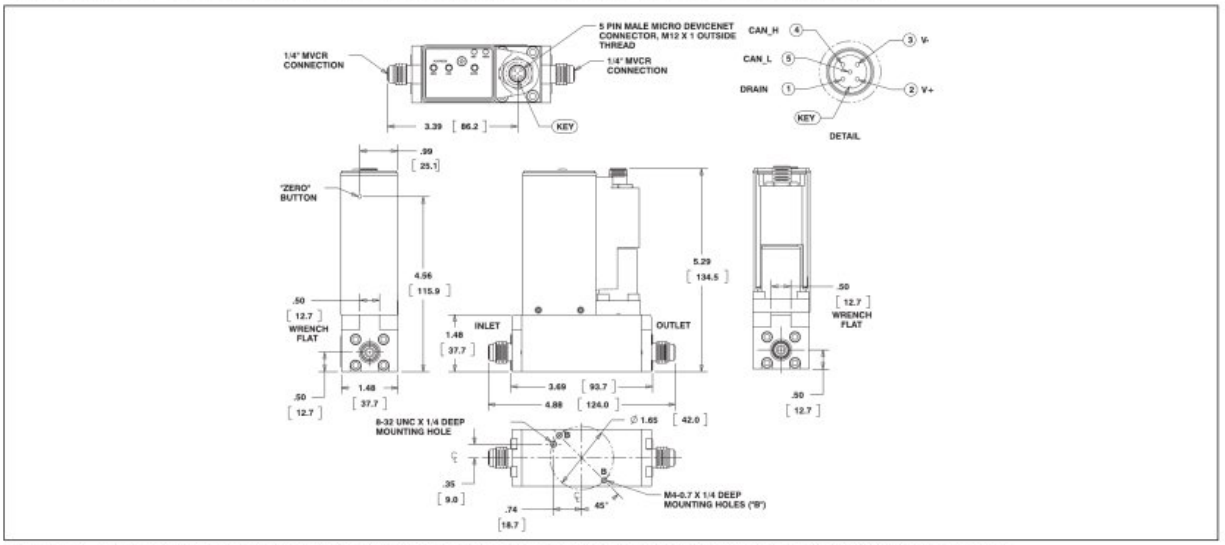


Figure 3 Models SLA6810D and SLA6820D Digital I/O DeviceNet Controller with 1/4" VCR Connections

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Brooks® Model SLA6800 PC

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Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration. The primary standard calibration equipment to calibrate our flow products is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

Brooks Instrument can provide customer seminars and dedicated training to engineers, end users and maintenance persons. Please contact your nearest sales representative for more details.

HELP DESK

In case you need technical assistance:

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Asia	☎ +011-81-3-5633-7100	

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

TRADEMARKS
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VCR ..... Cajon Co.

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