



Model SLA5810/20/40

Model SLAMf10/20

SLA5810/20/40 SLAMf10/20 Series

Pressure Controller (Thermal Mass Flow)

Elastomer Sealed, Digital, Upstream, Downstream, and Remote Transducer Pressure Controllers

Overview

The SLA Series pressure controllers and pressure controlling flowmeters have gained broad acceptance as the standard for accuracy, stability and reliability. These products have a wide pressure measurement and control range and are suitable for a broad range of operating conditions making them well suited for applications in thin film processes, chemical and petrochemical research, laboratory, analytical, fuel cell and life science among others.

Highlights of the SLA Series pressure controller product include: industry leading long term stability, accuracy backed by superior metrology systems and methods using primary flow calibration systems directly traceable to international standards, and a broad range of analog and digital I/O options to suit virtually any application. An independent diagnostic/service port permits users to troubleshoot or change process conditions without removing the pressure controller from service. This product is also available with a NEMA 4X/IP66 approved enclosure, making it perfect for hosedown/washdown applications.

Product Description

Based on the core control technology present in our industry-leading thermal mass flow controllers, Brooks' SLA Pressure Controllers are able to control the pressure of a gas based on a set point signal by replacing the thermal mass flow sensor with a pressure sensor. It utilizes closed-loop control, which eliminates the droop and hysteresis associated with traditional mechanical spring diaphragm pressure regulators. With the wide range of options and features available, the SLA Pressure Controller Series provides users with a single platform to support a broad range of applications.

Features and Benefits

| Features | Benefits |
|--------------------------------------|--|
| Closed loop control | Eliminates droop & hysteresis associated with traditional mechanical spring diaphragm pressure regulators |
| User accessible service port | Simplified installation, start-up, troubleshooting and access to diagnostics provides maximum uptime |
| Wide pressure range capabilities | Ability to control up to 4500 psig, giving it one of the widest pressure ranges on the market today |
| Advanced diagnostics | Ensures device is operating within user specified limits for high process yield and maximum uptime |
| Superior valve technology | Minimum leak-by, maximum turndown, fast response reduces overall gas panel cost and increases throughput |
| Adaptable mechanical configurations | Easily retrofit to existing systems |
| Primary standard calibration systems | Ensures measurement accuracy is traceable to international standards |
| Simple modular design | Easy-to-service elastomer sealed design provides options for factory or field service maximizing uptime and reducing total cost of ownership |
| IP66/NEMA 4X rated enclosure | Weatherproof protection optional for "Hosedown" applications such as: Food, Beverage, Pharmaceutical & Biotech |
| Hazardous area approvals | Designed to operate in non-incendive (Division 2/Zone 2) environments |

Product Description

Flexible Pressure Control Capabilities

Brooks' Pressure Controllers can be built for both upstream pressure control and downstream pressure control. These designations are determined by the location of the vessel where the pressure is being controlled. Our upstream pressure controllers can also be considered back pressure regulators, and our downstream pressure controllers can also be considered pressure regulators. In addition, a remote transducer configuration can be used to combine the benefits of pressure control and flow measurement.

Advanced Diagnostics

Pressure Controllers can be some of the most complex components in a gas delivery system, but they are typically critical to the tool's success. When dealing with highly toxic or corrosive gases, removing the pressure controller to determine if it is faulty should be the last resort. In response to this, Brooks pioneered smarter products with embedded self test routines and introduced an independent diagnostic/service port and software to provide the user with a simple interface, for troubleshooting without disturbing pressure controller operation.

Wide Pressure Range

The SLA Pressure Controller Series covers an extremely broad range of pressures. Brooks Pressure Controllers can control pressures ranging from sub-atmosphere all the way to 4500 psi (310 bar), giving it the widest pressure range on the market today! Even with major changes to the flowrate, Brooks Pressure Controllers are able to maintain stable pressure which keeps processes running smoothly and efficiently.

Broad Array of Communication Options

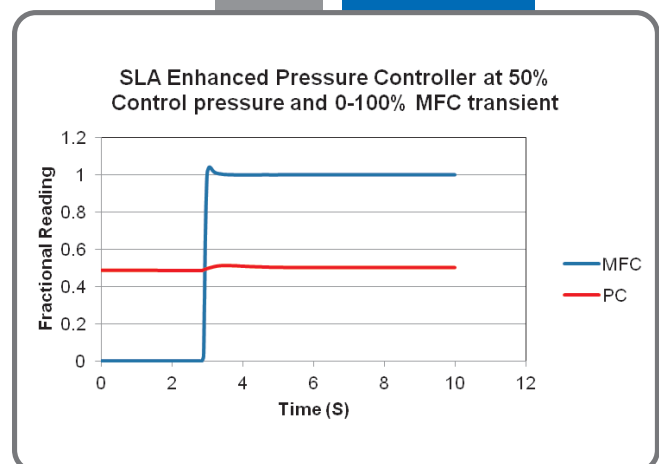
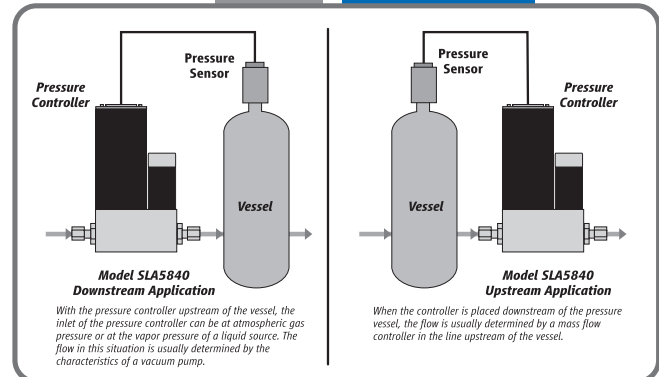
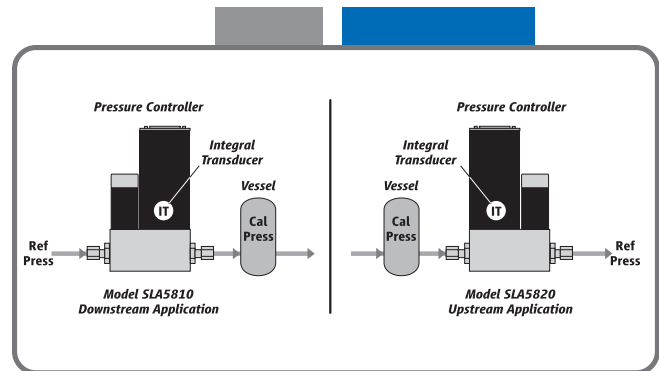
Brooks offers traditional analog options as well as RS-485 digital communications ("S-protocol", based on HART) Brooks also offers control interfaces via digital network protocols like DeviceNet (DeviceNet not available on SLAMf 10/20), a high speed (up to 500k baud) digital communication network, and Profibus. Brooks' communication capabilities and device-profiles have been certified by the ODVA (Open DeviceNet Vendor's Association) and the ITK (Interoperability Test Kit). Other network protocols are in development. Talk to your Brooks representative about your specific needs.

Wash-down Enclosure

The SLAMf Series comes equipped with an IP66 / NEMA4X rated enclosure. This makes these instruments perfect for wash-down or outdoor environments. So no matter how harsh the surroundings, the SLAMf Series keeps the process under control.

Hazardous Area Approvals

Brooks SLA Pressure Controller products come with various levels of Hazardous Area Approvals. The SLA5800 Series Pressure Controllers are approved for Class I, Division 2/Zone 2 areas, while the SLAMf Series Pressure Controllers have enclosures that can be used in Class II & Class III, Division 2/Zone 2.



Product Specifications

Flow Ranges and Pressure Ratings:

| Pressure Controller Model | Pressure Controller Control Mode | Flow Ranges N2 Eq. Ratings (lpm) | | Minimum Full Scale Pressure | Maximum Full Scale Pressure | Pressure Equipment Directive (PED) Module H Category |
|---------------------------|--|----------------------------------|-----------|-----------------------------|-----------------------------|--|
| | | Min. F.S. | Max. F.S. | Standard | Standard | |
| SLA5810/SLAMf10 | Downstream (Pressure Regulator) | 0.003 | 50* | 1 psi | 1500 psia/103 bara | Sound Engineering Practices (SEP) |
| | | 0.1 | 10 | 1500 psi | 4500 psia/310 bara | |
| SLA5820/SLAMf20 | Upstream (Back Pressure Regulator) | 0.003 | 50* | 1 psi | 1500 psia/103 bara | Sound Engineering Practices (SEP) |
| | | 0.1 | 10 | 1500 psi | 4500 psia/310 bara | |
| SLA5840 | Remote Transducer Upstream or Downstream | 0.003 | 50 | 10 psi | 1500 psia/103 bara | Sound Engineering Practices (SEP) |
| | | 0.1 | 10 | 1500 psi | 4500 psia/310 bara | |

* Consult sales agent or Brooks Instrument for flow limitations < 10 psi F.S. pressure

| Performance | SLA58510/20 & SLAMf10/20 | SLA5840 |
|---|--|---|
| Pressure Accuracy (Including Linearity and Hysteresis) | ±0.25% of Transducer F.S., F.S. > 300 psia ±0.12% of Transducer F.S., F.S. ≤ 300 psia | Dependent on Remote Pressure Transducer |
| Flow Accuracy (N2 equivalent) | N/A | ±0.9% of S.P. (20-100% F.S.) ±0.18% of F.S. (2-20% F.S., 1-20% F.S. from 1-50 lpm) |
| Control Range | 20:1 Typical - Application specific | |
| Repeatability & Reproducibility | 0.20% S.P. | |
| Linearity | Included in accuracy | |
| Response Time (Settling time within ±2% F.S. for 0-100% command step) | System dependent | <1 second |
| Zero Stability | < ± 0.001% F.S. per 30 days | Dependent on Remote Pressure Transducer |
| Temperature Coefficient | ±0.1% of F.S. per °C | Dependent on Remote Pressure Transducer |
| Pressure Coefficient (Flow Measurement Only) | N/A | ±0.03% per psi (0-200 psi N2) |
| Attitude Sensitivity | The accuracy of the Pressure Sensor is not attitude dependent | |

Ratings

| | | |
|-----------------------------|--|---|
| Operating Temperature Range | -14 to 65°C (7 to 149°F)** | |
| Transducer Pressure Ratings | 15 psia/1.03 bara for < 15 psia full scale 15 psig/1.03 barg for < 15 psig full scale 100 psia/6.9 bara for < 100 psia full scale 100 psig/6.9 barg for 15-100 psig full scale 300 psia/20.7 bara for 100-300 psia full scale 300 psig/20.7 barg for 100-300 psig full scale 3000 psia/206.9 bara for 300-3000 psia full scale 4500 psia/310.3 bara for 3000-4500 psia full scale | Dependent on Remote Pressure Transducer |
| Leak Integrity (external) | 1x10 ⁻⁹ atm. cc/sec He | |

Mechanical

| | |
|--------------------------|---|
| Valve Type | Normally Closed, Normally Open |
| Primary Wetted Materials | 316L Stainless Steel, High Alloy Stainless Steel, Viton® fluoroelastomers. Optional Buna-N, Kalrez®, Teflon®/Kalrez®, and EPDM |

Diagnostics

| | |
|-------------------------|--|
| Status Lights | MFC Health, Network Status |
| Alarms* | Sensor Output, Control Valve Output, Over Temperature, Power Surge/Sag, Network Interruption |
| Diagnostic/Service Port | RS485 via 2.5 mm jack (Located under the top cover in SLAMf version) |

*Alarm modes are dependent on the communications interface. These are described in the corresponding digital communication interface manual.

**Hazardous area certifications have a temperature range limitation of 0-65°C.

Electrical Specifications

| Communication Protocol | RS485 | Profibus® | DeviceNet® *** |
|---------------------------------|--|---|---|
| Electrical Connection (SLA58xx) | 1 x 15-pin Male Sub-D, (A) | 1 x 15-pin Male Sub-D 1 x 9-pin Female Sub-D | 1 M12 with threaded coupling nut (B) |
| Electrical Connection (SLAMf) | PG11 Cable Gland, 1/2" NPT (F) Conduit, M20 x 1.5 Conduit | | N/A |
| Analog I/O | 0-5 V, 1-5 V, 0-10 V, 0-20 mA, 4-20 mA | | N/A |
| Power Max./Purge | From +13.5 Vdc to +27 Vdc | | From +11 Vdc to +25 Vdc |
| Power Requirements Watts, Max. | Valve Orifice > 0.032": 8.7 Watts Valve Orifice ≤ 0.032": 5.2 Watts | | Valve Orifice > 0.032": 10 Watts Valve Orifice ≤ 0.032": 7 Watts |

Voltage Set Point Input Specifications

| | | |
|-----------------|------------------------------|-----|
| Nominal Range | 0-5 Vdc, 1-5 Vdc or 0-10 Vdc | N/A |
| Full Range | (-0.5)-11 Vdc | N/A |
| Absolute Max. | 18 V (without damage) | N/A |
| Input Impedance | >990 kOhms | N/A |

Current Set Point Input Specifications

| | | |
|-----------------|------------------------|-----|
| Nominal Range | 4-20 mA or 0-20 mA | N/A |
| Full Range | 0-22 mA | N/A |
| Absolute Max. | 24 mA (without damage) | N/A |
| Input Impedance | 100 Ohms | N/A |

Flow Output (Voltage) Specifications

| | | |
|---------------------|------------------------------|-----|
| Nominal Range | 0-5 Vdc, 1-5 Vdc or 0-10 Vdc | N/A |
| Full Range | (-1)-11 Vdc | N/A |
| Min Load Resistance | 2 kOhms | N/A |

Flow Output (Current) Specifications

| | | |
|---------------|--------------------|-----|
| Nominal Range | 0-20 mA or 4-20 mA | N/A |
| Full Range | 0-22 mA | N/A |
| Max. Load | 380 Ohms | N/A |

Analog I/O Alarm Output*

| | | |
|--------------------------|----------------|-----|
| Type | Open Collector | N/A |
| Max. Closed (On) Current | 25 mA | N/A |
| Max. Open (Off) Leakage | 1µA | N/A |
| Max. Open (Off) Voltage | 30 Vdc | N/A |

Analog I/O Valve Override Signal Specifications**

| | | |
|-------------------------|--|-----|
| Floating/Unconnected | Instrument controls valve to command set point | N/A |
| VOR < 0.3 Vdc | Valve Closed | N/A |
| 0.3 Vdc < VOR < 4.8 Vdc | Undefined | N/A |
| VOR > 4.8 Vdc | Valve Open | N/A |
| Input Impedance | 60 kOhms | N/A |
| Absolute Max. Input | (-25 Vdc) < VOR < 25 Vdc (without damage) | N/A |

*The Alarm Output is an open collector or "contact type" that is CLOSED (on) whenever an alarm is active.





The Alarm Output may be set to indicate any one of various alarm conditions.

** The Valve Override Signal (VOR) is implemented as an analog input which measures the voltage at the input and controls the valve based upon the measured reading as shown in this section.






*** Available on SLA5810/20/40 only.

Certifications

Certifications - SLA58XX

| Mark | Agency | Certification | Applicable Standard | Details |
|---|--------------------|--|---------------------------------------|--------------------------------|
|  | UL (Recognized) | Class I, Div 2, Group A, B, C, D Class I, Zone 2, IIC T4 Class II, Zone 22 | UL & CSA Standards | E73889 Vol 3, Sec 4 |
|  | ATEX | II 3 G Ex nA IIC T4 Gc | EN60079-0:2012 EN 60079-15:2010 | KEMA 04ATEX 1118X |
| | IECEX | II 3 G Ex nA IIC T4 Gc | IEC 60079-0:2011 IEC 60079-15:2010 | IECEX DEK 14.0072X |
|  | KOSHA | Ex nA IIC T4 | | 15-AV4BO-0641 15-AV4BO-0640 |
|  | CE | EMC Directive 2014/30/EU Directive 2011/65/EU | EN:61326-1:2013 | EMC RoHS |

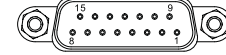
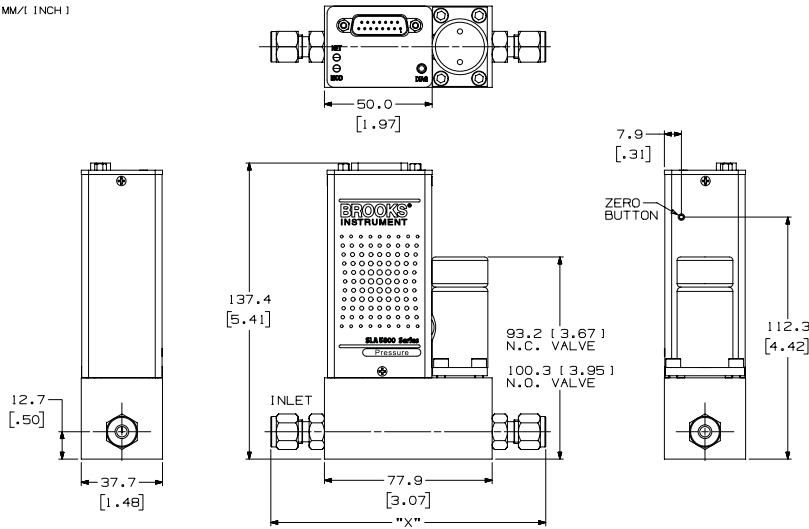
Certifications - SLAMfxx

| Mark | Agency | Certification | Applicable Standard | Details |
|---|--------------------|---|--|--|
|  | UL (Recognized) | Class I, Div 2, Group A, B, C, D Class I, Zone 2, IIC T4 Class II, Zone 22 IP66 | UL & CSA Standards | E73889 Vol 3, Sec 4 |
|  | UL (Listed) | Class I, Div 2, Group A, B, C, D Class I, Zone 2, IIC T4 Class II, Zone 22 IP66 | UL & CSA Standards | E73889 Vol 1, Sec 25 |
|  | ATEX | II 3 G Ex nA IIC T4 Gc II 3 D Ex tc IIIC T 85 °C Dc IP66 | EN 60079-0 : 2012 + A11 : 2013 EN 60079-15 : 2010 EN 60079-31 : 2014 | KEMA 04ATEX1290 X |
| | IECEX | Ex nA IIC T4 Gc Ex tc IIIC T 85 °C Dc IP66 | IEC 60079-0 : 2011 + Corr. 2012 + Cor. 2013 IEC 60079-15 : 2010 IEC 60079-31 : 2013 | IEC KEM 07.0043X |
|  | KOSHA | Ex nA IIC T4 Ex tD A22 IP66 T85°C | The Ministry of Employment and Labor Notice No. 2013-34 Article 34 of the Industrial Safety and Health | 15-AV4BO-0638 15-AV4BO-0639 16-AV4BO-0328X 16-AV4BO-0327X |
|  | CE | EMC Directive 2014/30/EU Directive 2011/65/EU | EN:61326-1:2013 | EMC RoHS |

Product Dimensions

SLA5810/20, Thru-Flow, RS485

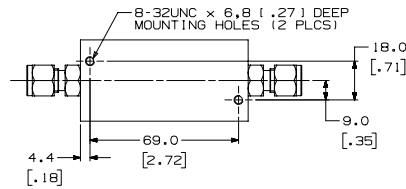
MM/1 INCH



| 15-PIN SUB-D MALE CONNECTOR | |
|-----------------------------|------------------------------------|
| PIN # | FUNCTION |
| 1 | SETPOINT COMMON |
| 2 | PRESSURE OUTPUT (0-5V, 1-5V) |
| 3 | ALARM OUT |
| 4 | PRESSURE OUTPUT (0-20 mA, 4-20 mA) |
| 5 | POWER SUPPLY (13.5-27V) |
| 6 | NOT CONNECTED |
| 7 | SETPOINT INPUT (0-20mA, 4-20mA) |
| 8 | SETPOINT INPUT (0-5V, 1-5V) |
| 9 | POWER COMMON |
| 10 | PRESSURE OUT COMMON |
| 11 | NOT CONNECTED |
| 12 | VALVE OVERRIDE INPUT |
| 13 | AUX INPUT (0-5V, 0-10V) |
| 14 | RS-485, B (-), INPUT/OUTPUT |
| 15 | RS-485, A (+), INPUT/OUTPUT |

| FITTING | X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *122.7 [4.83] |
| 1/4" TUBE COMP. | *127.8 [5.03] |
| 3/8" TUBE COMP. | *130.8 [5.15] |
| 1/4" VCR | 124.0 [4.88] |
| 1/4" VCO | 117.6 [4.63] |
| 1/4" NPT-F | 125.5 [4.94] |
| 3mm TUBE COMP. | *127.8 [5.03] |
| 6mm TUBE COMP. | *127.8 [5.03] |
| 10mm TUBE COMP. | *131.3 [5.17] |
| 3/8"-1/2" VCR | 138.9 [5.47] |
| 3/8"-1/2" VCO | 128.8 [5.07] |

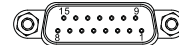
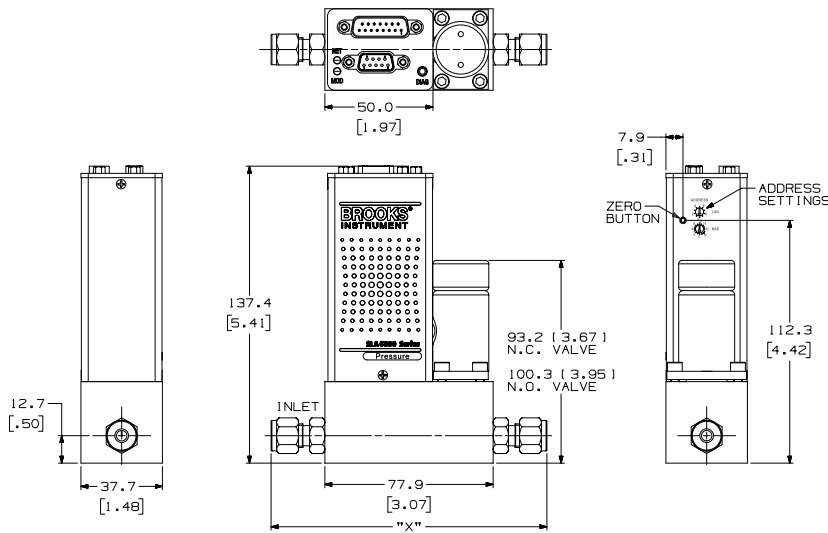
* OVERALL LENGTH FINGER TIGHT



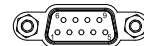
Note : Aux. Input only used for Remote Transducer Pressure Controllers.

SLA5810/20, Thru-Flow, Profibus

MM/1 INCH



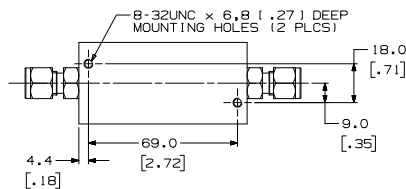
| 15-PIN SUB-D MALE CONNECTOR | |
|-----------------------------|-------------------------------------|
| PIN # | FUNCTION |
| 1 | SETPOINT COMMON |
| 2 | PRESSURE OUTPUT (0-5V, 1-5V, 0-10V) |
| 3 | ALARM OUT |
| 4 | PRESSURE OUTPUT (0-20mA, 4-20mA) |
| 5 | POWER SUPPLY (13.5-27V) |
| 6 | NOT CONNECTED |
| 7 | SETPOINT INPUT (0-20mA, 4-20mA) |
| 8 | SETPOINT INPUT (0-5V, 1-5V, 0-10V) |
| 9 | POWER COMMON |
| 10 | PRESSURE OUT COMMON |
| 11 | NOT CONNECTED |
| 12 | VALVE OVERRIDE INPUT |
| 13 | AUX INPUT (0-5V, 0-10V) |
| 14 | NOT CONNECTED |
| 15 | NOT CONNECTED |



| 9-PIN SUB-D FEMALE CONNECTOR | |
|------------------------------|--------------------------|
| PIN # | FUNCTION |
| 1 | NOT CONNECTED |
| 2 | NOT CONNECTED |
| 3 | RXD/TXD - B - red wire |
| 4 | NOT CONNECTED |
| 5 | GROUND |
| 6 | +5Vdc |
| 7 | NOT CONNECTED |
| 8 | RXD/TXD - A - green wire |
| 9 | NOT CONNECTED |

| FITTING | X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *122.7 [4.83] |
| 1/4" TUBE COMP. | *127.8 [5.03] |
| 3/8" TUBE COMP. | *130.8 [5.15] |
| 1/4" VCR | 124.0 [4.88] |
| 1/4" VCO | 117.6 [4.63] |
| 1/4" NPT-F | 125.5 [4.94] |
| 3mm TUBE COMP. | *127.8 [5.03] |
| 6mm TUBE COMP. | *127.8 [5.03] |
| 10mm TUBE COMP. | *131.3 [5.17] |
| 3/8"-1/2" VCR | 138.9 [5.47] |
| 3/8"-1/2" VCO | 128.8 [5.07] |

* OVERALL LENGTH FINGER TIGHT

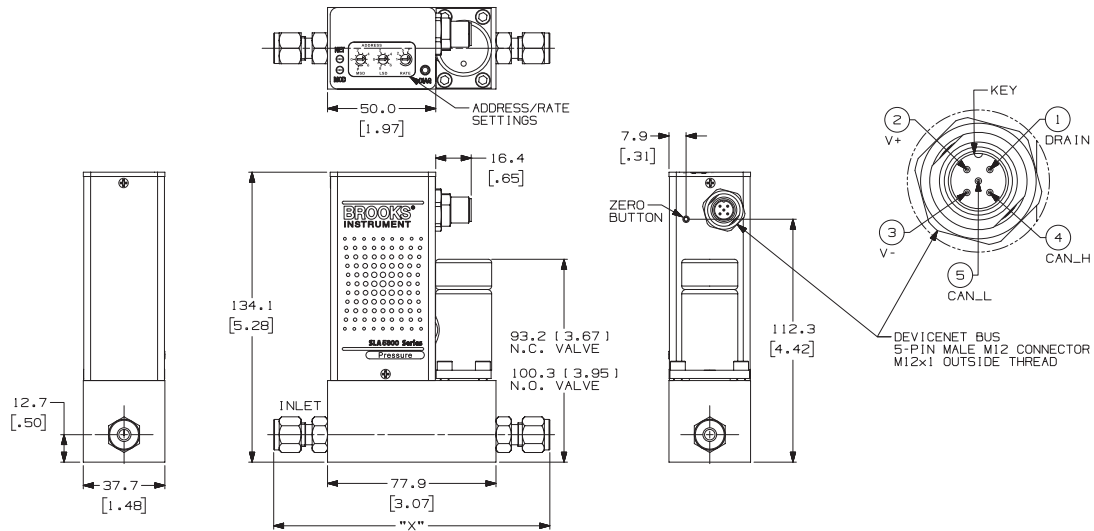


Note : Aux. Input only used for Remote Transducer Pressure Controllers.

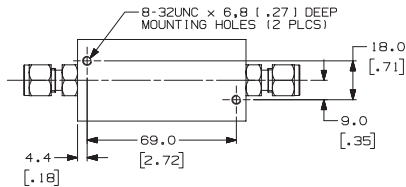
Product Dimensions (continued)

SLA5810/20, Thru-Flow, DeviceNet

MM/1 INCH



| FITTING | X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *122.7 (4.83) |
| 1/4" TUBE COMP. | *127.8 (5.03) |
| 3/8" TUBE COMP. | *130.8 (5.15) |
| 1/4" VCR | 124.0 (4.88) |
| 1/4" VCO | 117.6 (4.63) |
| 1/4" NPT-F | 125.5 (4.94) |
| 3mm TUBE COMP. | *127.8 (5.03) |
| 6mm TUBE COMP. | *127.8 (5.03) |
| 10mm TUBE COMP. | *131.3 (5.17) |
| 3/8"-1/2" VCR | 138.9 (5.47) |
| 3/8"-1/2" VCO | 128.8 (5.07) |

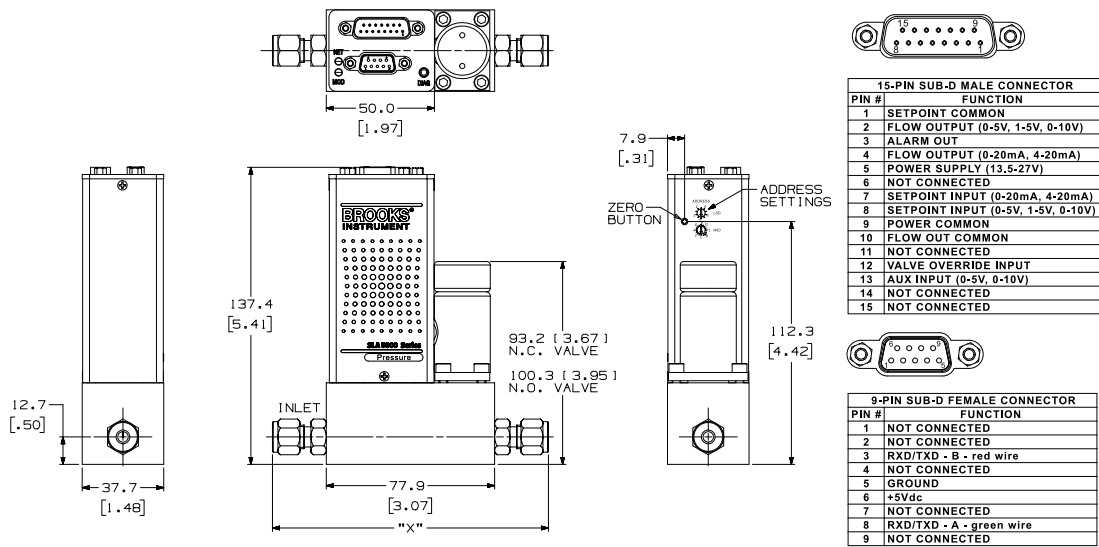


Note : Aux. Input only used for Remote Transducer Pressure Controllers.

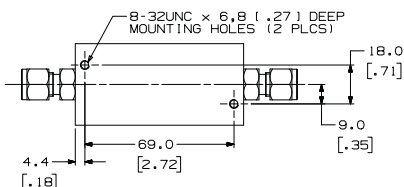
* OVERALL LENGTH FINGER TIGHT

SLA5840, Thru-Flow, Profibus

MM/1 INCH



| FITTING | X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *122.7 (4.83) |
| 1/4" TUBE COMP. | *127.8 (5.03) |
| 3/8" TUBE COMP. | *130.8 (5.15) |
| 1/4" VCR | 124.0 (4.88) |
| 1/4" VCO | 117.6 (4.63) |
| 1/4" NPT-F | 125.5 (4.94) |
| 3mm TUBE COMP. | *127.8 (5.03) |
| 6mm TUBE COMP. | *127.8 (5.03) |
| 10mm TUBE COMP. | *131.3 (5.17) |
| 3/8"-1/2" VCR | 138.9 (5.47) |
| 3/8"-1/2" VCO | 128.8 (5.07) |

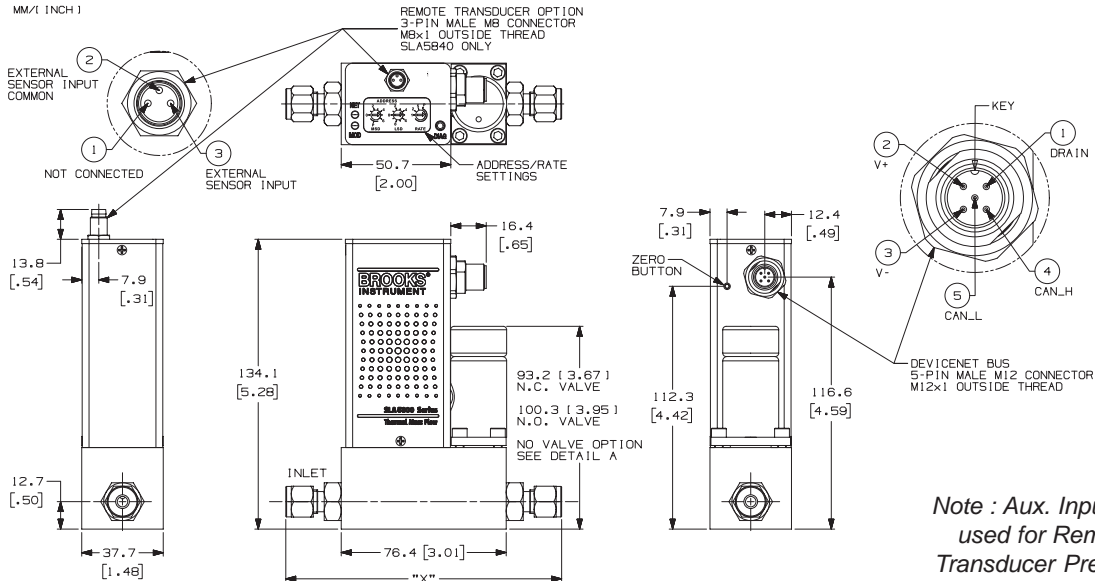


Note : Aux. Input only used for Remote Transducer Pressure Controllers.

* OVERALL LENGTH FINGER TIGHT

Product Dimensions (continued)

SLA5840, Thru-Flow, DeviceNet



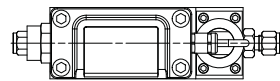
| FITTING | "X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *123.1 [4.85] |
| 1/4" TUBE COMP. | *127.7 [5.03] |
| 3/8" TUBE COMP. | *130.7 [5.15] |
| 1/2" TUBE COMP. | *134.8 [5.31] |
| 1/4" VCR | 124.1 [4.89] |
| 1/4" VCO | 116.0 [4.56] |
| 1/4" NPT-F | 118.5 [4.67] |
| 3mm TUBE COMP. | *122.2 [4.81] |
| 6mm TUBE COMP. | *127.8 [5.03] |
| 10mm TUBE COMP. | *131.1 [5.16] |
| 3/8"-1/2" VCR | 131.7 [5.19] |
| 3/8"-1/2" VCO | 127.2 [5.01] |
| 1/4" RC (BSP) | 116.8 [4.59] |

* OVERALL LENGTH FINGER TIGHT

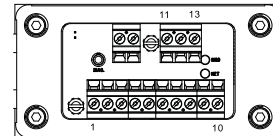
SLAMf10/20, Thru-Flow, RS485

MM/1 INCH 1

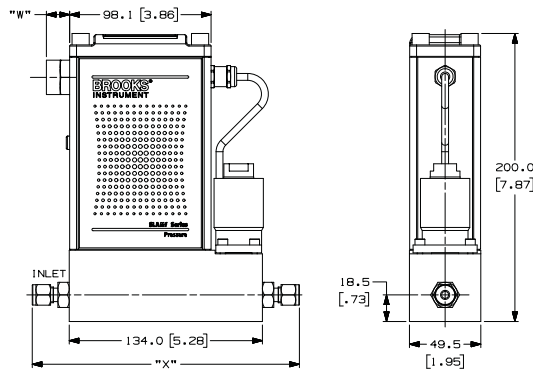
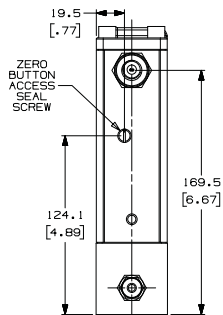
| CABLE CONNECTOR | "W" DIMENSION |
|--|---------------|
| CABLE GLAND 0.20 [5.1] TO 0.39 [9.9] DIA. CABLE | 28.6 [1.12] |
| 1/2" NPT-F CONDUIT | 16.5 [0.65] |
| M20x1.5 (F) CONDUIT | 12.5 [0.49] |



TOP VIEW
SHOWN WITH COVER REMOVED



| TERMINAL | FUNCTION |
|----------|----------------------------------|
| 1 | SETPOINT COMMON |
| 2 | PRESSURE OUTPUT (0-5V, 1-5V) |
| 3 | ALARM OUT |
| 4 | PRESSURE OUTPUT (0-20mA, 4-20mA) |
| 5 | POWER SUPPLY (13.5-27V) |
| 6 | SETPOINT INPUT (0-20mA, 4-20mA) |
| 7 | SETPOINT INPUT (0-5V, 1-5V) |
| 8 | POWER COMMON |
| 9 | PRESSURE OUT COMMON |
| 10 | VALVE OVERRIDE INPUT |
| 11 | AUX INPUT (0-5V, 0-10V) |
| 12 | RS-485_B (-) INPUT/OUTPUT |
| 13 | RS-485_A (+) INPUT/OUTPUT |



| FITTING | "X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *180.7 [7.12] |
| 1/4" TUBE COMP. | *185.3 [7.30] |
| 3/8" TUBE COMP. | *188.4 [7.42] |
| 1/2" TUBE COMP. | *192.4 [7.58] |
| 1/4" VCR | 181.8 [7.16] |
| 1/4" VCO | 173.6 [6.84] |
| 1/4" NPT-F | 176.2 [6.94] |
| 6mm TUBE COMP. | *185.4 [7.30] |
| 10mm TUBE COMP. | *188.8 [7.43] |
| 3/8"-1/2" VCR | 189.4 [7.46] |
| 3/8"-1/2" VCO | 184.8 [7.28] |
| 1/4" RC-F (BSP) | 174.2 [6.86] |

* OVERALL LENGTH FINGER TIGHT

Note : Aux. Input only used for Remote Transducer Pressure Controllers.

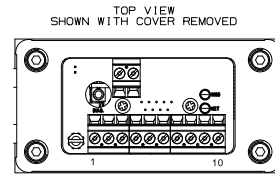
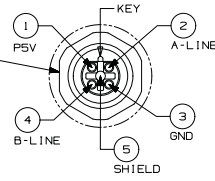
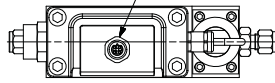
Product Dimensions (continued)

SLAMf10/20, Thru-Flow, Profibus

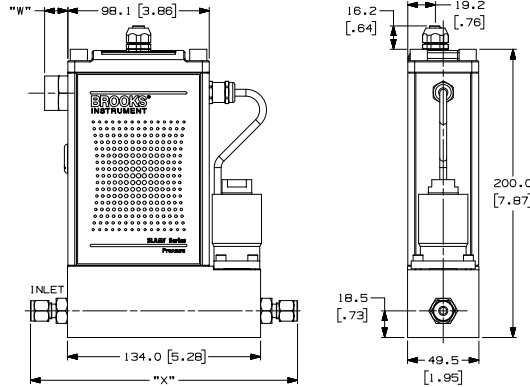
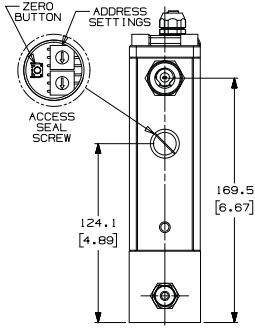
MM/1 INCH

| CABLE CONNECTOR CABLE GLAND 0.20 [5.1] TO 0.39 [9.9] DIA. CABLE | "W" DIMENSION |
|---|---------------|
| 1/2" NPT-F CONDUIT | 16.5 [0.65] |
| M20x1.5 (F) CONDUIT | 12.5 [0.49] |

PROFIBUS M12 CONNECTOR
5-PIN FEMALE
M12x1 INTERNAL THREAD
ORIENTATION OF KEY NOT FIXED

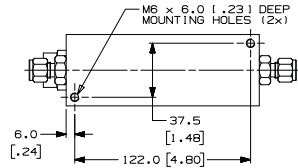


| TERMINAL | FUNCTION |
|---|--------------------------|
| 1 | POWER SUPPLY (13.5-27V) |
| 2 | VALVE OVERRIDE INPUT |
| 3 | POWER COMMON |
| 4 | AUX COMMON |
| 5 | AUX INPUT (0-5V, 0-10V) |
| TERMINAL PROFIBUS M12 CONNECTOR WIRES TO TERMINALS 6-10 | |
| 6 | P5V (BROWN) |
| 7 | RXD/TXD - B-LINE (RED) |
| 8 | GROUND (BLUE) |
| 9 | RXD/TXD - A-LINE (GREEN) |
| 10 | SHIELD (GRAY) |



| FITTING | "X" DIMENSION |
|-----------------|---------------|
| 1/8" TUBE COMP. | *180.7 [7.12] |
| 1/4" TUBE COMP. | *185.3 [7.30] |
| 3/8" TUBE COMP. | *188.4 [7.42] |
| 1/2" TUBE COMP. | *192.4 [7.58] |
| 1/4" VCR | 181.8 [7.16] |
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| 3/8"-1/2" VCO | 184.8 [7.28] |
| 1/4" RC-F (BSP) | 174.2 [6.86] |

* OVERALL LENGTH FINGER TIGHT



Note : Aux. Input only used for Remote Transducer Pressure Controllers.

Model Code

| Code Description | Code Option | Option Description |
|--|-------------|--|
| I. Base Model Numbers | SLA | Smart Link Advantage |
| II. Package / Finish Specifications | 5B | Standard Elastomer Series |
| | MF | Standard Elastomer Series (NEMA 4X/IP66 Housing) |
| III. Function | 1 | Downstream Pressure Controller |
| | 2 | Upstream Pressure Controller |
| | 4 | Remote Transducer Pressure Controller (SLA58xx only) |
| IV. Gas or Range | 0 | 3 ccm - 50 lpm |
| V. Digital I/O Communication (SLA58xx Pressure Controllers) | A | None (select applicable analog I/O) |
| | D | DeviceNet I/O (with 5-pin micro connector) (Only on SLA5810/20/40) |
| | P | Profibus (2x sub-D) |
| | S | RS485 (select applicable analog I/O) |
| V. Digital I/O Communication (SLAMfx Pressure Controllers) | A | None (select applicable analog I/O) |
| | P | Profibus (5-pin female M12, M20 x 1.5 conduit) |
| | R | Profibus (5-pin female M12, PG11 cable gland) |
| | T | Profibus (5-pin female M12, 1/2" NPT (F) conduit) |
| | S | RS485 (select applicable analog I/O) |
| VI. Mechanical Connection | 1A | Without adapters, 9/16" - 18 UNF |
| | 1B | 1/4" tube compression |
| | 1C | 1/8" tube compression |
| | 1D | 3/8" tube compression |
| | 1E | 1/4" VCR |
| | 1F | 1/4" VCO |
| | 1G | 1/4" NPT |
| | 1H | 6mm tube compression |
| | 1J | 10mm tube compression |
| | 1L | 3/8"-1/2" VCR |
| | 1M | 3/8"-1/2" VCO |
| | 1P | 1/2" tube compression |
| | 1T | 1/4" RC (BSP) |
| | 1Y | 3mm tube compression |
| | B1 | 1/4" tube compression w/filter |
| | C1 | 1/8" tube compression w/filter |
| | D1 | 3/8" tube compression w/filter |
| | E1 | 1/4" VCR w/filter |
| | F1 | 1/4" VCO w/filter |
| | G1 | 1/4" NPT w/filter |
| | H1 | 6mm tube compression w/filter |
| | J1 | 10mm tube compression w/filter |
| | L1 | 3/8"-1/2" VCR w/filter |
| | M1 | 3/8"-1/2" VCO w/filter |
| | P1 | 1/2" tube compression w/filter |
| | T1 | 1/4" RC (BSP) w/filter |
| | Y1 | 3mm tube compression w/filter |
| VII. O-ring Material | A | Viton |
| | B | Buna |
| | C | PTFE |
| | D | Kalrez |
| | E | EPDM |
| | J | FDA/USP Class VI - Viton |
| | L | FDA/USP Class VI - EPDM |
| VIII. Valve Seat | B | Viton |
| | C | Buna |
| | D | Kalrez |
| | E | EPDM |
| | F | PTFE |
| | G | Metal (SLA5810/20/40 Only) |
| IX. Valve Type | 1 | Normally closed (\leq 1500 psi) |
| | 4 | Normally closed High Pressure (1500 - 4500 psi) |
| | 5 | Normally open (SLA5810/20 Only) (\leq 1500 psi) |

Model Code (continued)

| Code Description | Code Option | Option Description |
|---|---------------------------------------|--|
| X. Analog I/O Communications (SLA58xx Pressure Controllers) | A | None - Digital Communications only |
| | B | 0-5 Volt 0-5 Volt |
| | C | 4-20 mA 4-20 mA |
| | L | 1-5 Volt 1-5 Volt |
| | M | 0-20 mA 0-20 mA |
| | 0 | 0-10 Volt 0-10 Volt |
| | 1 | 0-5 Volt 4-20 mA |
| | 2 | 0-5 Volt 0-20 mA |
| | 3 | 4-20 mA 0-5 Volt |
| | 4 | 0-20 mA 0-5 Volt |
| X. Analog I/O Communications (SLAMfxx Pressure Controllers) | A | None - Digital Communications only |
| | E | 4-20 mA 0-5 Volt PG11 Gland |
| | F | 0-5 Volt 0-5 Volt PG11 Gland |
| | G | 4-20 mA 4-20 mA PG11 Gland |
| | H | 0-5 Volt 4-20 mA PG11 Gland |
| | I | 0-5 Volt 0-20 mA PG11 Gland |
| | J | 0-5 Volt 0-5 Volt 1/2" NPT (F) Conduit |
| | K | 4-20 mA 4-20 mA 1/2" NPT (F) Conduit |
| | N | 0-5 Volt 4-20 mA M20 x 1.5 Conduit |
| | O | 0-5 Volt 0-20 mA M20 x 1.5 Conduit |
| | P | 4-20 mA 0-5 Volt M20 x 1.5 Conduit |
| | Q | 0-20 mA 0-5 Volt M20 x 1.5 Conduit |
| | R | 1-5 Volt 1-5 Volt PG11 Gland |
| | S | 0-20 mA 0-20 mA PG11 Gland |
| | T | 1-5 Volt 1-5 Volt 1/2" NPT (F) Conduit |
| | U | 0-20 mA 0-20 mA 1/2" NPT (F) Conduit |
| | V | 0-5 Volt 0-5 Volt M20 x 1.5 Conduit |
| | W | 1-5 Volt 1-5 Volt M20 x 1.5 Conduit |
| | X | 0-20 mA 0-20 mA M20 x 1.5 Conduit |
| | Y | 4-20 mA 4-20 mA M20 x 1.5 Conduit |
| | Z | 0-20 mA 0-5 Volt PG11 Gland |
| 5 | 0-5 Volt 4-20 mA 1/2" NPT (F) Conduit | |
| 6 | 0-5 Volt 0-20 mA 1/2" NPT (F) Conduit | |
| 7 | 4-20 mA 0-5 Volt 1/2" NPT (F) Conduit | |
| 8 | 0-20 mA 0-5 Volt 1/2" NPT (F) Conduit | |
| XI. Power Supply Inputs | 1 | +15 Vdc |
| | 2 | 24 Vdc |
| XII. Output Enhancements | A | Standard response |
| XIII. Certification | 1 | Safe Area |
| | 2 | For Zone II Atex/IECEx |

Sample Standard Model Code

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII |
|-----|----|-----|----|---|----|-----|------|----|---|----|-----|------|
| SLA | 58 | 5 | 0 | A | 1A | A | B | 1 | B | 1 | A | 1 |

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