



Model SLAMf

SLAMf Series

Elastomer Sealed, Digital,
Gas Mass Flow Controllers & Meters
for Hose Down/Wash Down Hazardous Area Applications

Whether it's dust, moisture, temperature extremes or wash-down requirements, the SLAMf Series thermal mass flow controllers and meters deliver the precise accuracy and long-term stability of our proven SLA5800 family of meters and controllers. A specifically engineered NEMA4X/IP66 enclosure protects our advanced digital electronics and ensures stable, accurate measurement and control of your process-critical gas and liquid mass flows. The SLAMf Series is well suited for chemical and petrochemical research, laboratory, analytical, fuel cell, biotechnology, and life science applications, among others.

Highlights of the SLAMf Series mass flow products include: industry leading long term stability; accuracy backed by superior 17025 metrology systems and methods using primary 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 set alarms and diagnostics, tune, troubleshoot or change flow conditions without removing the mass flow controller from service.

The SLAMf Series provides a highly configurable platform based on a simple modular architecture. The feature set was carefully selected to enable drop-in replacement and upgrade of many brands of mass flow controllers. With the wide range of features and options available, the SLAMf Series provides users with a single platform to support a broad range of applications.

Features	Benefits
NEMA4X/IP66 rated hardened enclosure	Ensures process accuracy and control in harsh conditions
Industry leading long-term sensor stability	Increased system uptime and reduced cost of ownership by reducing maintenance and eliminating periodic recipe adjustments and/or recalibrations
User accessible service port	Simplified installation, start-up, troubleshooting and access to diagnostics provides maximum uptime
Alarms and diagnostics	Ensures device is operating within user specified limits for high process yield uptime
Superior valve technology	Minimum leak-by, wide turndown, fast response and superior corrosion resistant materials reduces overall gas panel cost and increases throughput
High accuracy traceable to international standards	Calibration by verified metrology systems ensures precise process gas flow control
Simple modular design	Easy-to-service elastomer sealed design provides for factory or field service maximizing uptime and reducing total cost of ownership

[View SLAMf Product Page](#)



Beyond Measure

Superior Thermal Flow Measurement Sensor

Brooks' sensor technology combines:

- Excellent signal to noise performance for good accuracy at low setpoints
- Superior long-term stability through enhanced sensor design, manufacturing and extensive burn-in process
- Isothermal packaging to reduce sensitivity to external temperature changes
- Corrosion resistant sensor flow path

Advanced Diagnostics

The mass flow controller remains the most complex and critical component in gas delivery systems. When dealing with highly toxic or corrosive gases, removing the mass flow controller to determine if it is faulty should be the last resort. In response to this, Brooks pioneered smarter mass flow controllers with embedded self-test routines and introduced an independent diagnostic/service port to provide the user with a simple interface, for troubleshooting without disturbing flow controller operation.

NEMA4X/IP66 Rating

The SLAMf Series provides the highest rated enclosure - IP66 (or "Ingress Protection") and NEMA 4 (National Electrical Manufacturer Association) ratings. These are used to define levels of sealing effectiveness of electrical enclosures against intrusion from foreign bodies (tools, dirt etc.) and moisture"

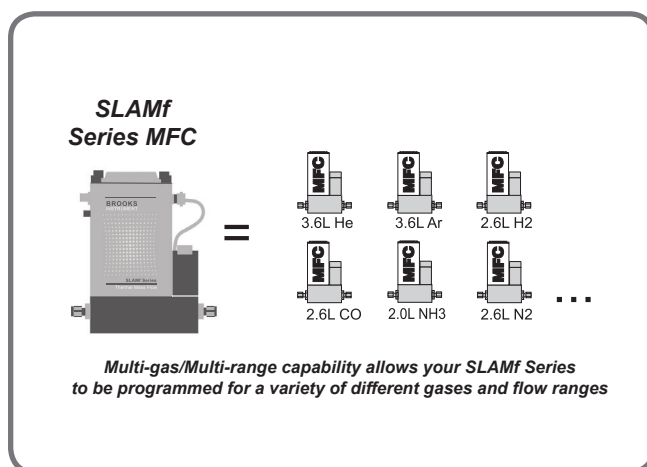
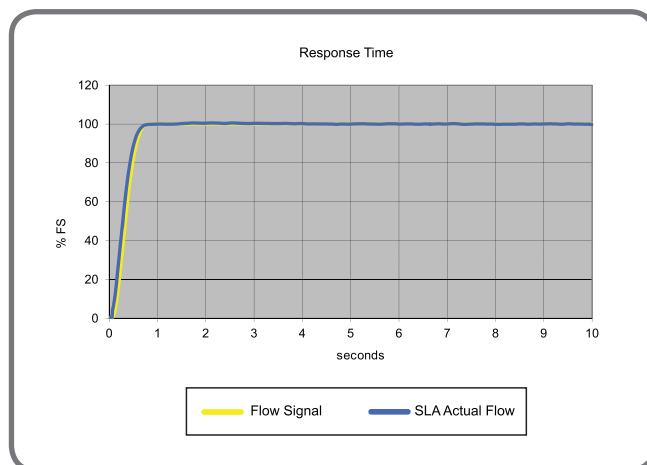
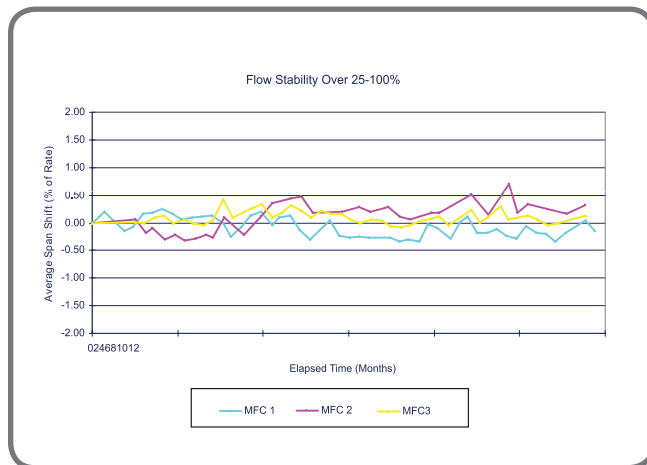
- IP66 Enclosure - IP rated as "dust tight" and protected against heavy seas or powerful jets of water.
- NEMA 4 is intended mainly for outdoor use where extra protection against moisture and wind driven rain is required.

Broad Array of Communication Options

Brooks offers traditional 0-5 volt and 4-20mA analog options as well as RS485 digital communications ("S-protocol", based on HART). Brooks also offers control interfaces via digital network protocols like DeviceNet, 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).

Multi-gas/Multi-range Capabilities

The SLAMf Series multi-gas and multi-range capabilities reduce inventory. Storage and pre-programming of up to 6 gas calibrations easily permits users to switch between different gasses and ranges on a single device.



Want to see how our MFCs work?

SLAMf Series Standard

Flow Ranges and Pressure Ratings:

Mass Flow Controller Model	Mass Flow Meter Model	Flow Ranges N ₂ Eq. Ratings		Maximum Operating Pressure psi/bar		PED Module H Category
		Min. F.S.	Max. F.S.	Standard ¹	Optional ¹	
SLAMf50	SLAMf60	0.003	50 lpm	1500 psi/103 bar	4500 psi/310 bar	SEP
SLAMf51	SLAMf61	15	150 lpm ²	1500 psi/103 bar ³	NA ⁴	SEP
SLAMf53	SLAMf63	100	2500 lpm	1000 psi/70 bar	NA	1 for all 150 lb flanges 2 for all other connections
-	SLAMf64	18	2160 m ³ /h	Flow rate dependant		1-1/2" - 100 bar 2" & 3" - 85 bar 4" & 6" - 70 bar 8" - 50 bar

¹ Sanitary fittings - Model code 5A, 5B, 5C, 5D & 5E rated to 500 psi Maximum Pressure (see Table VI on page 12)

² 600 lpm of H₂ possible with decreased accuracy. Greater than 40 psig inlet required for flows greater than 100 lpm N₂ equivalent

³ 1000 psi/70 bar for UL Certificate

⁴ 4500 psi/310 bar available as a special on SLAMf5861 only

	SLAMf50/60	SLAMf51/61	SLAMf53/63	SLAMf64
PERFORMANCE				
Flow Accuracy (accuracy includes uncertainty from reference standards) ⁵	±0.9% of S.P. (20-100% F.S.), +0.18% of F.S. (<20% F.S.)		±0.9% of S.P. (20-100% F.S.), ±0.18% of F.S. (2-20% F.S.) >1100 slpm F.S. ±1.0% of F.S.	±1% F.S.
Control Range	100:1 for F.S. from 1-50 lpm (50:1 for all other F.S. flows)			N/A
Repeatability & Reproducibility	0.20% S.P.			±0.25% S.P.
Linearity	Included in accuracy			
Response Time (Settling Time within ±2% F.S. for 0-100% command step)	< 1 second		< 3 seconds	N/A
Zero Stability	< ± 0.2% F.S. per year			
Temperature Coefficient	Zero: <0.05% of F.S. per °C. Span: < 0.1% of S.P. per °C			
Pressure Coefficient	±0.03% per psi (0-200 psi N ₂)			
Attitude Sensitivity	<0.2% F.S. maximum deviation from specified accuracy after re-zeroing			

⁵ Accuracy at calibration conditions

RATINGS				
Operating Temperature Range	-14 to 65°C (7 to 149°F) ⁷			
Minimum Pressure Differential (Controllers)	5 psi/0.35 bar	10 psi/0.69 bar	Min.: 11.7 psi/0.81 bar at 500 lpm Min.: 14.5 psi/1.00 bar at 1000 lpm Min.: 35.0 psi/2.41 bar at 2500 lpm	N/A
Maximum Pressure Differential (Controllers)	Application specific up to 1500 psi/103.4 bar ⁸	50 psi/3.45 bar	300 psi/20.0 bar	N/A
Leak Integrity (external)	1x10 ⁻⁹ atm. cc/sec He			
Valve Shut Down (leak by) ⁹	<1% of F.S.			N/A

MECHANICAL		
Valve Type	Normally Closed, Normally Open ¹⁰ , Meter	
Primary Wetted Materials	316L Stainless Steel, High Alloy Stainless Steel, Viton® fluoroelastomers, Buna-N, Kalrez®, Teflon®/Kalrez®, and EPDM	

DIAGNOSTICS	
Status Lights	MFC Health, Network Status
Alarms ⁶	Control Valve Output, Flow Totalizer, Network Interruption, Over Temperature, Power Surge/Sag, Service Required
Diagnostic/Service Port	RS485 via 2.5mm jack

⁶ Alarm modes are dependent on the communications interface. These are described in the corresponding digital communication interface manual.

⁷ Hazardous area certifications have a temperature range limitation of 0-65°C.

⁸ >1500 PSI DP as a Special Order

⁹ Metal and Teflon Seats are <5% of Full Scale

¹⁰ Leak by and valve shutdown specs for normally open valve type.

Electrical Specifications

Communication Protocol	RS485	Profibus®	DeviceNet™
Electrical Connection	1 x 15-pin Male Sub-D, (A)	1 x 15-pin Male Sub-D/ 1 x 9-pin Female Sub-D	1 x M12 with threaded coupling nut (B)
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": 8W Valve Orifice ≤ 0.032": 5W Without Valve: 2W		Valve Orifice > 0.032": 10W Valve Orifice ≤ 0.032": 7W Without Valve: 4W

FLOW INPUT (VOLTAGE) 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 Impedence	>990 kOhms	N/A
Required Max. Sink Current	0.002 mA	N/A

FLOW INPUT (CURRENT) 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 Impedence	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 (@ 0-20 mA); 3.8-22 mA (@ 4-20 mA)	N/A
Max. Load	380 Ohms (for supply voltage: < 16 Vdc)	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
1 Vdc < VOR < 4 Vdc	Valve Normal	N/A
VOR > 4.8 Vdc	Valve Open	N/A
Input Impedence	800 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.

SLAMf Series *Biotech*

Efficiency and simplicity combine to improve bioprocessing performance with the new SLAMf Series *Biotech* MFC. It incorporates several features created specifically to help streamline MFC purchasing, improve process gas control, enhance flexibility and satisfy regulatory requirements.

To serve the unique requirements of your bioprocesses, Brooks Instrument has created two SLAMf Series *Biotech* options packages, built on the proven performance of the bioprocess-leading SLAMf Series MFC .

As noted in the ordering instructions, all options are combined into packages with convenient ordering codes, eliminating the need to order options individually.

The *Biotech* Options Packages are not available on SLAMF64.

SLAMf Series *Biotech* Options Packages

Performance Package - Model Code S

Includes multiple performance enhancements reducing cost of operation

High Turndown Ratio

Reduces number of MFCs needed to control wide flow ranges

Enhanced Control Valve

Extremely low leak rate can eliminate need for redundant valves

Enhanced Sensor Design

Clean welded construction meets industry standards for cleanliness

Pre-calibrated Multi-Gas Pages¹²

Air, CO₂, N₂ & O₂ : gas pages can be changed in situ to reduce the variety of spare instruments kept in stock

Premium Package - Model Code T

Performance Package Features plus:

Includes premium materials and associated certificates tailored to industry requirements

Class VI Elastomers

USP, FDA, ADI-free Class VI O-rings & Valve Seats
(Certificate Included)

Certifications

Materials of Construction (wetted path)
2.2 Material Cert¹³
ICC Calibration Traceability

¹² CO₂ Actual Gas Calibration available for SLAMf50/60 & SLAMf51/61. Use Model Code U for Performance Package, and Model Code V for Premium package.

¹³ 3.1 Material Certs for pressure boundary components available as an option on Premium Package.

Learn More About
the SLAMf Series *Biotech*

SLAMF Series *Biotech*

Performance	SLAMf50/60	SLAMf51/61	SLAMf53/63
Full Scale Flow Range (N ₂ , Eq.)	5 sccm -50 lpm	15 -150 ¹ lpm	100 -2500 lpm
Gasses Supported ²	Air, CO ₂ , Nitrogen & Oxygen		
Flow Accuracy (accuracy includes linearity and calibration system uncertainty) ³	±0.9% of S.P. (20-100% F.S.) ±0.18% of F.S. (20% F.S.)		±0.9% of S.P. (20-100% F.S.) ±0.18% of S.P. (0.67-20% F.S.) >1100 slpm F.S. ±1.0% of F.S.
Repeatability & Reproducibility	0.20% S.P.		
Turndown (control range)	250:1	250:1	150:1
Response Time	< 1 Second	< 1 Second	< 3 Seconds
Zero Stability	< ± 0.2% F.S. per year		
Temperature Coefficient	<0.05% F.S. per °C		
Valve Shut Down (leak-by)	0.005 sccm		15.6 sccm

- 1 Maximum flow depends on pressure conditions; consult applications engineering for details
 2 Calibration on CO₂ available as an option on SLAMf50/60 & SLAMf51/61
 3 Accuracy at Calibration Conditions

Ratings	SLAMf50/60	SLAMf51/61	SLAMf53/63
Inlet Pressure Range: ⁴	5 psig to 60 psig	10 psig to 60 psig	8 psig to 60 psig
Outlet pressure range:	Atmospheric	Atmospheric	Atmospheric
Maximum Pressure	Same as standard		
Differential Pressure (Controller Only)	60 psig ⁵		
Valve Configuration	Standard SLA with Special Factory Tuning/Normally Closed		
Ambient Temperature Range	-14°C - 50°C		
Sensor Design	Enhanced construction to meet industry standards for cleanliness		

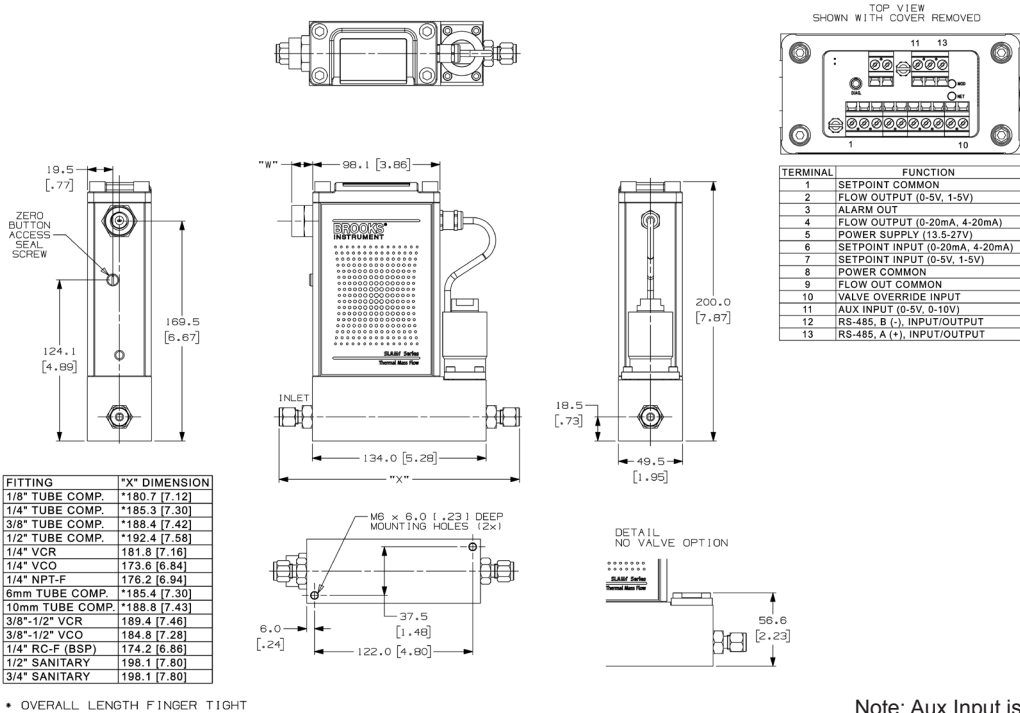
- 4 Performance at minimum inlet pressure will be gas and flow range dependent. Consult Applications Engineering for details.
 5 Maximum pressure drop. Actual pressure drop will be gas and flow dependent. Consult Applications Engineering for details.

Code Description	Code Option	Option Description
Biotech Options Packages	S	Performance Package ^A
	T	Premium Package ^B
	U	Performance Package with CO ₂ Calibration ^C
	V	Premium Package with CO ₂ Calibration ^C

- A Performance Package must be ordered for basic *Biotech* model features;
 B Premium Package includes Performance Package features.
 C Not available on SLAMf53 or SLAMf63

Learn More About
the SLAMf Series *Biotech*

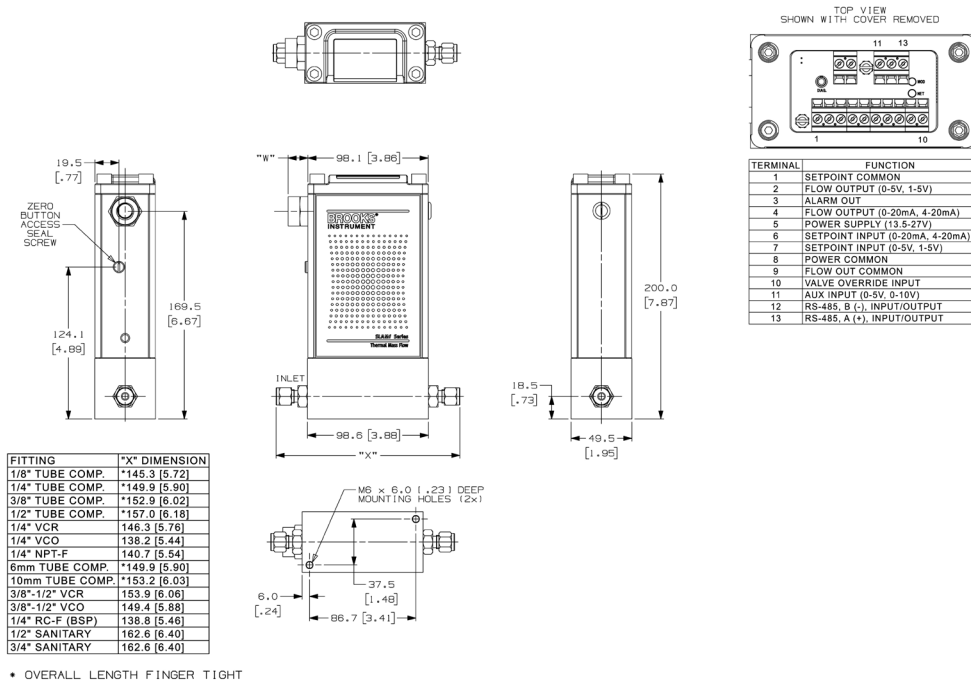
SLAMf50, Analog/RS485



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

SLAMf50031B

SLAMf60, Analog/RS485

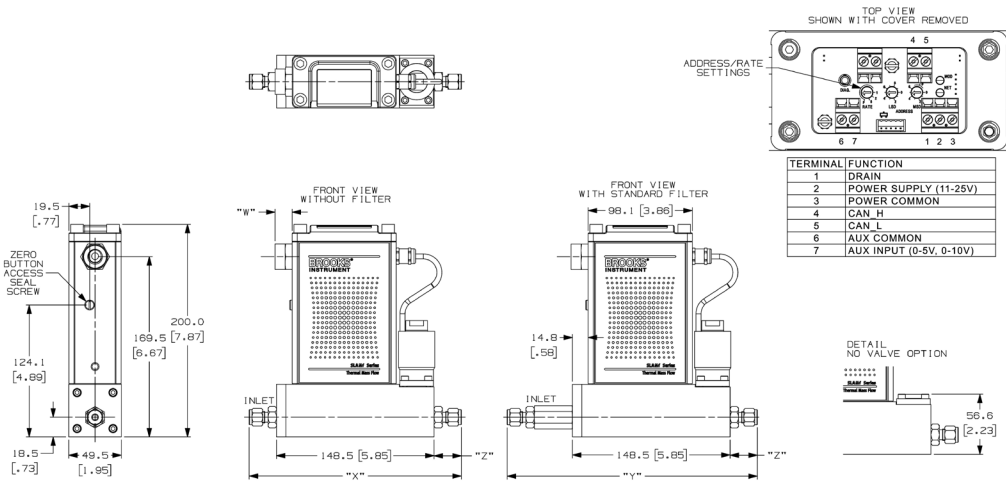


Note: Aux Input is used for Remote Transducer Pressure Controllers only.

SLAMf60031B

Access our library of CAD Drawings

SLAMf51, DeviceNet



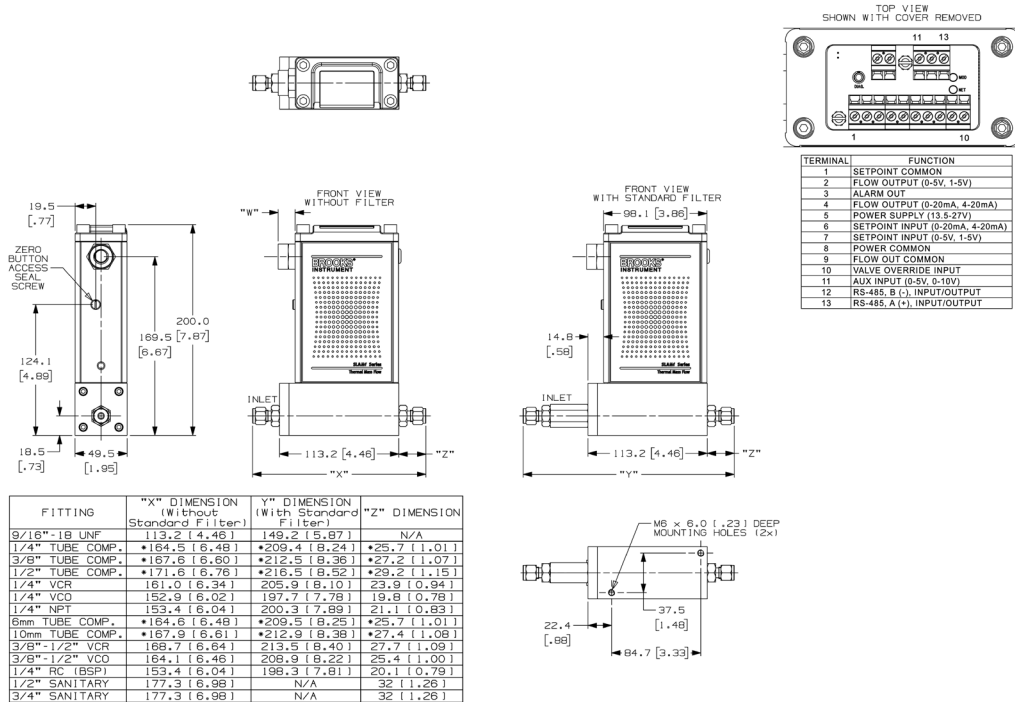
FITTING	"X" DIMENSION (Without Standard Filter)	"Y" DIMENSION (With Standard Filter)	"Z" DIMENSION
9/16"-18 UNF	149.5 [5.85]	184.5 [7.26]	N/A
1/4" TUBE COMP.	•199.9 [7.87]	•235.8 [9.28]	•25.7 [1.01]
3/8" TUBE COMP.	•202.8 [7.99]	•238.5 [9.40]	•27.2 [1.07]
1/2" TUBE COMP.	•206.9 [8.15]	•242.9 [9.56]	•29.2 [1.15]
1/4" VCR	196.3 [7.73]	232.2 [9.14]	23.9 [0.94]
1/4" VCO	188.1 [7.41]	224.1 [8.82]	19.8 [0.78]
1/4" NPT	190.7 [7.51]	226.7 [8.92]	21.1 [0.83]
6mm TUBE COMP.	•199.9 [7.87]	•235.8 [9.28]	•25.7 [1.01]
10mm TUBE COMP.	•203.3 [8.00]	•239.4 [9.42]	•27.4 [1.08]
3/8"-1/2" VCR	203.9 [8.03]	239.9 [9.44]	27.7 [1.09]
3/8"-1/2" VCO	199.3 [7.85]	235.3 [9.26]	25.4 [1.00]
1/4" RC (BSP)	188.7 [7.43]	224.6 [8.84]	20.1 [0.79]
1/2" SANITARY	212.6 [8.37]	N/A	32 [1.26]
3/4" SANITARY	212.6 [8.37]	N/A	32 [1.26]

• OVERALL LENGTH FINGER TIGHT

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

SLAMf51033B

SLAMf61, Analog/RS485



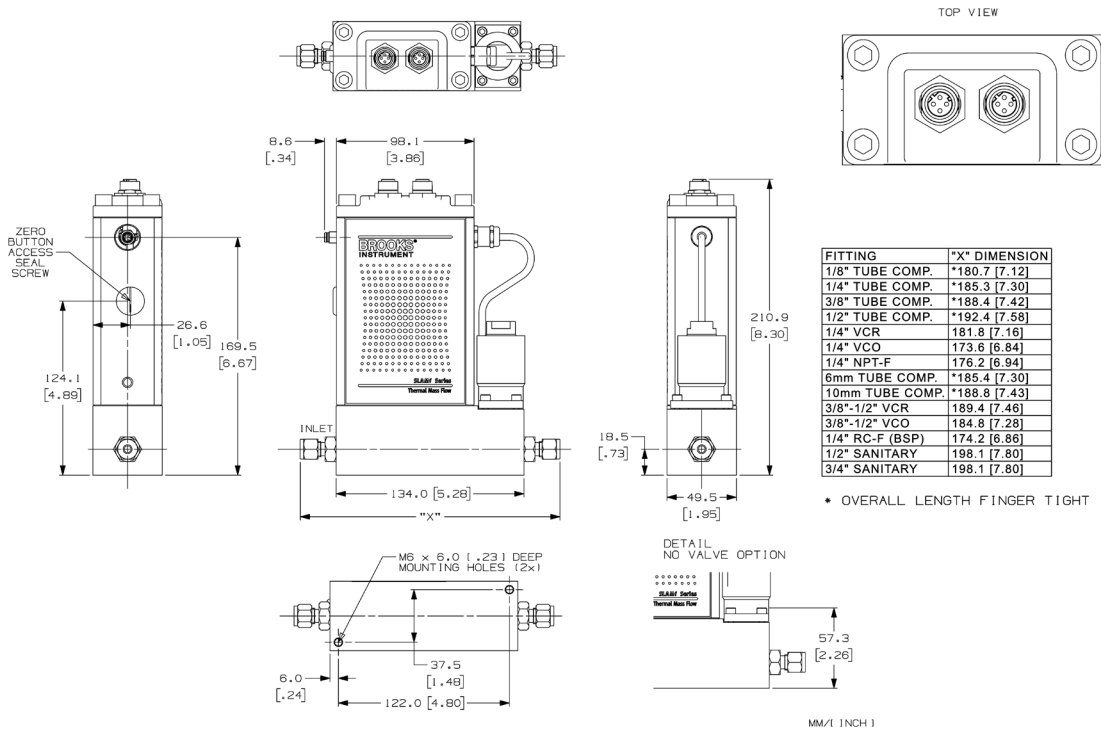
FITTING	"X" DIMENSION (Without Standard Filter)	"Y" DIMENSION (With Standard Filter)	"Z" DIMENSION
9/16"-18 UNF	113.2 [4.46]	149.2 [5.87]	N/A
1/4" TUBE COMP.	•164.5 [6.48]	•209.4 [8.24]	•25.7 [1.01]
3/8" TUBE COMP.	•167.6 [6.60]	•212.5 [8.36]	•27.2 [1.07]
1/2" TUBE COMP.	•171.6 [6.76]	•216.5 [8.52]	•29.2 [1.15]
1/4" VCR	161.0 [6.34]	205.9 [8.10]	23.9 [0.94]
1/4" VCO	152.9 [6.02]	197.7 [7.78]	19.8 [0.78]
1/4" NPT	153.4 [6.04]	200.3 [7.89]	21.1 [0.83]
6mm TUBE COMP.	•164.6 [6.48]	•209.5 [8.25]	•25.7 [1.01]
10mm TUBE COMP.	•167.9 [6.61]	•212.9 [8.38]	•27.4 [1.08]
3/8"-1/2" VCR	168.7 [6.64]	213.5 [8.40]	27.7 [1.09]
3/8"-1/2" VCO	164.1 [6.46]	208.9 [8.22]	25.4 [1.00]
1/4" RC (BSP)	153.4 [6.04]	198.3 [7.81]	20.1 [0.79]
1/2" SANITARY	177.3 [6.98]	N/A	32 [1.26]
3/4" SANITARY	177.3 [6.98]	N/A	32 [1.26]

• OVERALL LENGTH FINGER TIGHT

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

SLAMf51031C

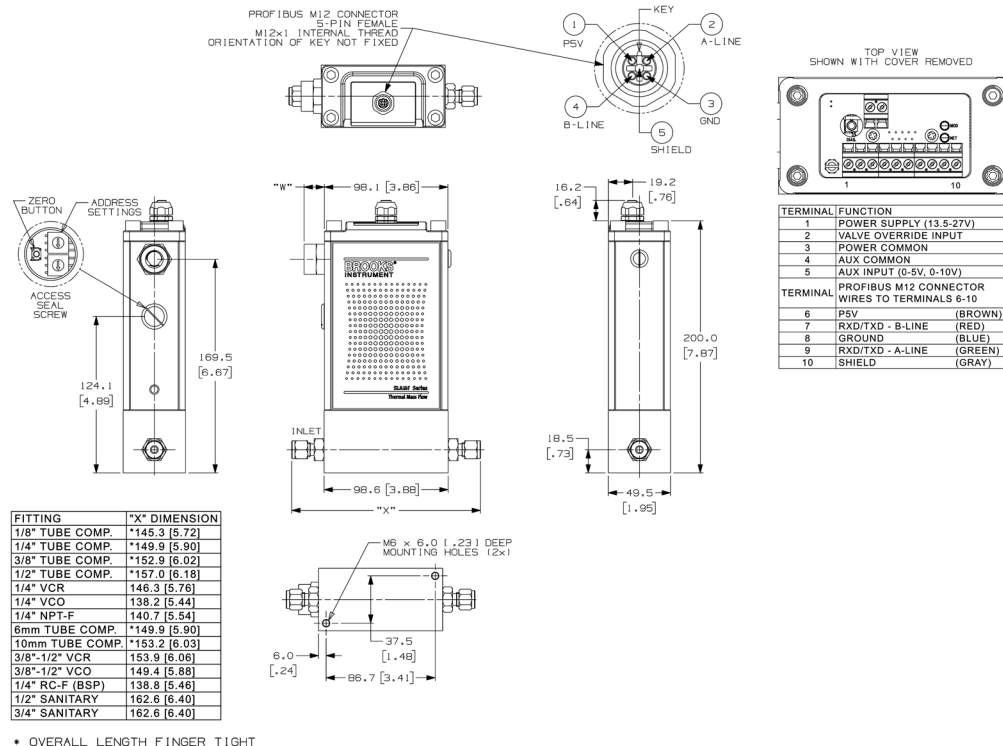
SLAMf50 EtherCAT



SLAMf50035B

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

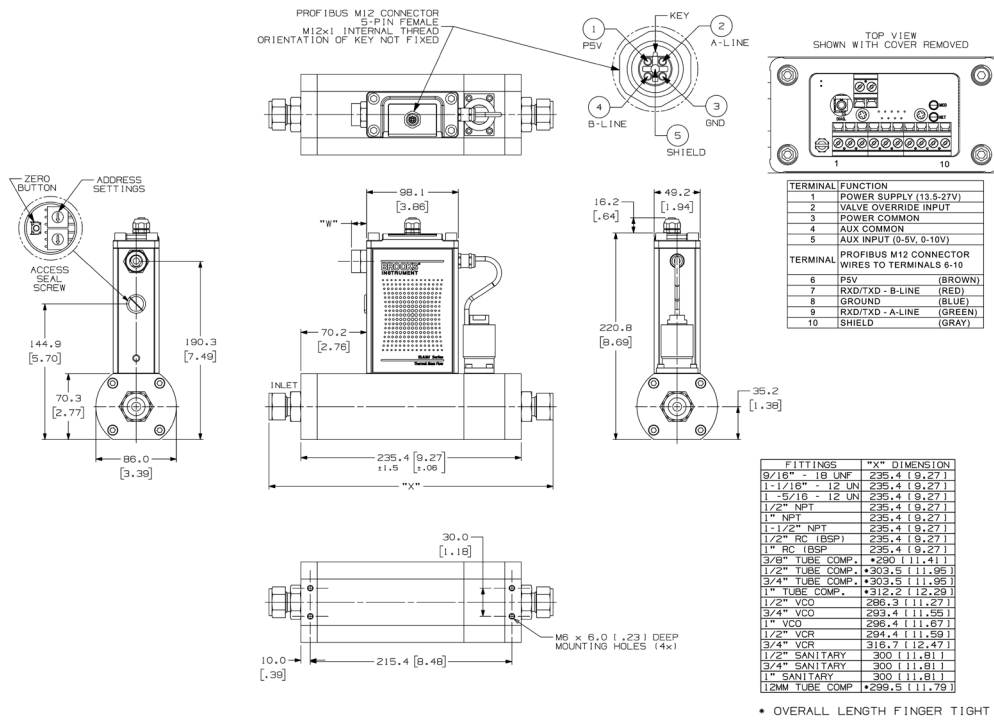
SLAMf60, Profibus



SLAMf60032C

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

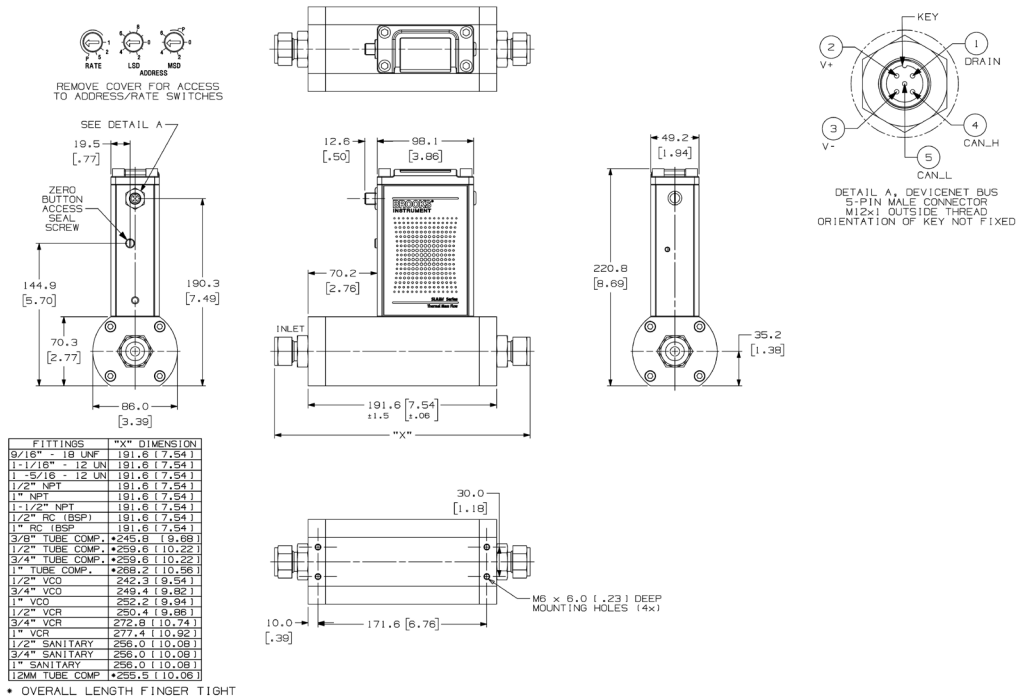
SLAMf53, Profibus



SLAMf53032D

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

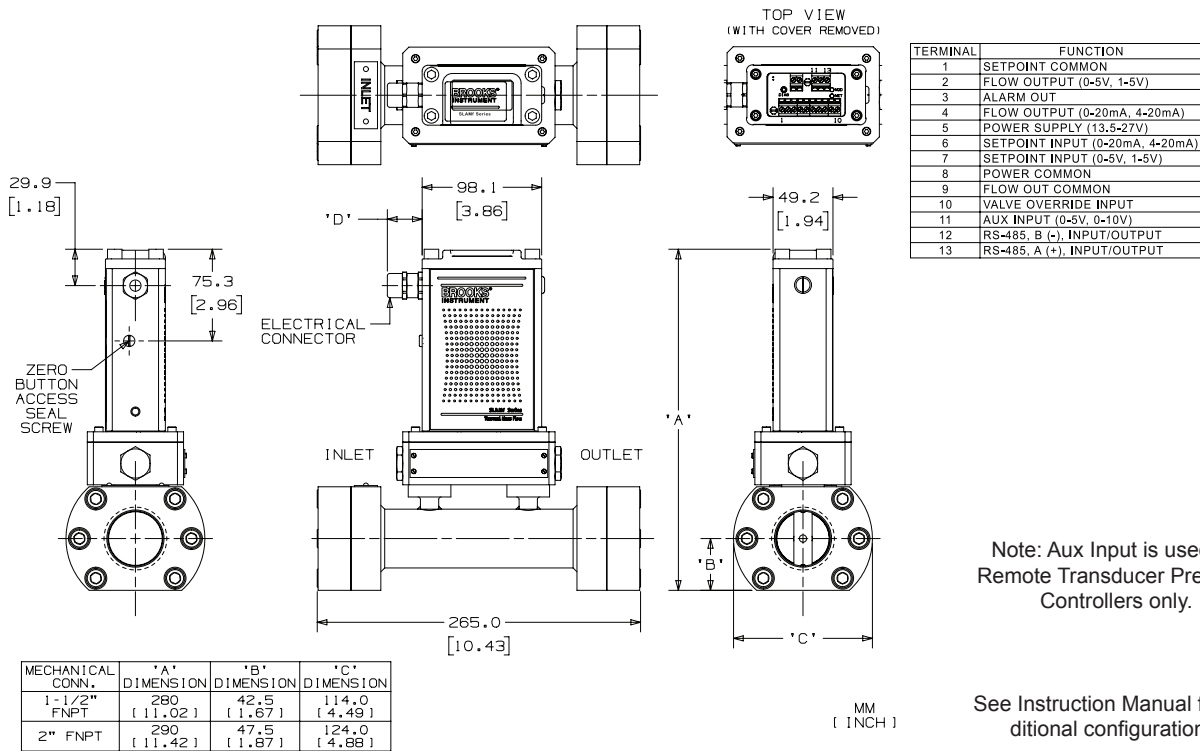
SLAMf63, DeviceNet



SLAMf63034C

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

SLAMf64, 1-1/2" or 2" FNPT, RS485



Certifications

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		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

Note: Not all certifications are available for all SLAMF specifications and configurations. Please contact Brooks Customer Service for details.

Code Description	Code Option	Option Description ¹
I. Base Model Numbers	SLA	
II. Package / Finish Specifications	MF	Standard Elastomer Series
III. Function	5	Mass Flow Controller
	6	Mass Flow Meter
IV. Body Size	0	3 ccm - 50 lpm N ₂ Equivalent
	1	20 - 100 lpm N ₂ Equivalent
	3	100 - 2500 lpm N ₂ Equivalent
	4	300 - 36000 lpm N ₂ Equivalent
V. Digital I/O Communication	A	None (select applicable analog I/O)
	D	DeviceNet I/O (with 5-pin micro connector)
	E	EtherCAT
	J	DeviceNet I/O (with PG11 cable gland)
	K	DeviceNet I/O (with M20x1.5 conduit)
	L	DeviceNet I/O (with 1/2" NPT (F) conduit)
	P	Profibus (5-pin female M12, M20x1.5 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 (Body size 0 & 1 only)	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
	5A ²	9/16-18 X 1/2" Sanitary
	5B ²	9/16 -48 X 3/4" Sanitary
VI. Mechanical Connection (Body size 3 unless noted Size 4 only. Size 4 noted)	2A	Without adapters, 9/16" - 18 UNF
	2B	1-1/16"-12 SAE/MS
	2C	3/8" tube compression
	2D	1/2" tube compression
	2E	3/4" tube compression
	2F	1" tube compression
	2G	1/2" NPT (F)
	2H	1" NPT (F)
	2J	1-1/2" NPT (F) (Size 3 & 4)
	2K	1/2" VCO
	2L	3/4" VCO
	2M	1/2" VCR
	2N	1/2" RC (BSP)
	2P	1" RC (BSP)
	2R	1-5/16"-12 SAE/MS
	2S	1" VCO
	2T	3/4" VCR
	2U	1" VCR
	2W	2" NPT Size 4 only
	2X	12 mm tube compression
	5C ²	1 1/16-12 X 1/2" Sanitary
	5D ²	11/16-12 X 3/4" Sanitary
	5E ²	1 1/16-12 X 1" Sanitary

Code Description ¹	Code Option	Option Description ¹
VI. Mechanical Connection (cont.) (Body size 3 unless noted Size 4 only. Size 4 noted)	3A	DIN DN15 PN40 Flange
	3B	DIN DN25 PN40 Flange
	3C	DIN DN40 PN40 Flange
	3D	DIN DN15 PN40 Flange
	3E	ANSI 1/2" 150# RF Flange
	3F	ANSI 1/2" 300# RF Flange
	3G	ANSI 1" 150# RF Flange
	3H	ANSI 1" 300# RF Flange
	3J	ANSI 1-1/2" 150# RF Flange (Size 3 & 4)
	3K	ANSI 1-1/2" 300# RF Flange
	3L	ANSI 2" 150# RF Flange (Size 4 only)
	3N	ANSI 3" 150# RF Flange (Size 4 only)
	3P	ANSI 3-1/2" 300# RF Flange (Size 4 only)
	3Q	ANSI 3" 600# RF Flange (Size 4 only)
	3R	DIN DN80 PN40 Flange (Size 4 only)
	3S	DIN DN80 PN64 Flange (Size 4 only)
	3T	DIN DN80 PN100 Flange (Size 4 only)
	4A	ANSI 4" 150# RF Flange (Size 4 only)
	4B	ANSI 4" 300# RF Flange (Size 4 only)
	4C	ANSI 4" 600# RF Flange (Size 4 only)
	4D	DIN DN100 PN16 Flange (Size 4 only)
	4E	DIN DN100 PN40 Flange (Size 4 only)
	4F	DIN DN100 PN64 Flange (Size 4 only)
	5C	
	5D	
	5E	
	6A	ANSI 6" 150# RF Flange (Size 4 only)
	6B	ANSI 6" 300# RF Flange (Size 4 only)
	6C	ANSI 6" 600# RF Flange (Size 4 only)
	6D	DIN DN150 PN16 Flange (Size 4 only)
	6E	DIN DN150 PN40 Flange (Size 4 only)
	6F	DIN DN150 PN64 Flange (Size 4 only)
	8A	ANSI 8" 150# RF Flange (Size 4 only)
8B	ANSI 8" 300# RF Flange (Size 4 only)	
8C	DIN DN200 PN10 Flange (Size 4 only)	
8D	DIN DN200 PN16 Flange (Size 4 only)	
8E	DIN DN200 PN25 Flange (Size 4 only)	
8F	DIN DN200 PN64 Flange (Size 4 only)	
VII. O-ring Material	A	Viton
	B	Buna
	C	PTFE
	D	Kalrez
	E	EPDM (Not available in Size 4)
	J	FDA/USP Class VI - Viton (Not available in Size 4)
	L	FDA/USP Class VI - EPDM (Not available in Size 4)
VIII. Valve Seat	A	None (Sensor only)
	B	Viton (for body size 3, diaphragm material = PTFE)
	C	Buna (for body size 3, diaphragm material = PTFE)
	D	Kalrez (for body size 3, diaphragm material = PTFE)
	E	EPDM (for body size 3, diaphragm material = PTFE) (Not available in Size 4)
	F	PTFE

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Code Description ¹	Code Option	Option Description ¹	
IX. Valve Type	0	None (Sensor only)	
	1	Normally closed	
	2	Normally closed (Pressure diff. >30 psig (2 bar))	
	3	Normally closed (Pressure diff. <30 psig (2 bar))	
	4	Normally closed - high pressure	
	5	Normally open	
X. Analog I/O Communications	A	None - Digital Communications only	
	E	4-20 mA 0-5 Volt PG11 Cable Gland	
	F	0-5 Volt 0-5 Volt PG11 Cable Gland	
	G	4-20 mA 4-20 mA PG11 Cable Gland	
	H	0-5 Volt 4-20 mA PG11 Cable Gland	
	I	0-5 Volt 0-20 mA PG11 Cable 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 M20x1.5 Conduit	
	O	0-5 Volt 0-20 mA M20x1.5 Conduit	
	P	4-20 mA 0-5 Volt M20x1.5 Conduit	
	Q	0-20 mA 0-5 Volt M20x1.5 Conduit	
	X. Analog I/O Communications (cont.)	R	1-5 Volt 1-5 Volt PG11 Cable Gland
		S	0-20 mA 0-20 mA PG11 Cable 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 M20x1.5 Conduit	
W		1-5 Volt 1-5 Volt M20x1.5 Conduit	
X		0-20 mA 0-20 mA M20x1.5 Conduit	
Y		4-20 mA 4-20 mA M20x1.5 Conduit	
Z		0-20 mA 0-5 Volt PG11 Cable 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 2 Atex	
	3	Div. 2 / Zone 2 UL Listed	
	4	Div. 2 / Zone 2 UL Recognized	
	5	Zone 2 IECEx	
	6	KOSHA	

Sample Standard Model Code

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
SLA	MF	4	0	S	1A	A	B	1	E	1	A	1

1 See Page 5 for *Biotech* Model Code Options

2 Sanitary Fittings Model Code 5A, 5B, 5C, 5D and 5E are limited to 500 PSI Maximum Pressure

Request a Quote

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 and is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

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