

# Flow Measurement & Control

## Mass Flow Equipment

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### Model 819 Flow Meters and 829 Flow Controllers



#### Description

MATHESON Model 819 flow meters and 829 flow controllers are among the most sophisticated flow sensing transducers available. These are digital/analog instruments, accurate, repeatable, and customizable, designed to be used in a variety of non-corrosive gas applications. All flow data visible on one LCD screen (setpoint, mass flow, vol. flow, pressure, temperature).

Multi-gas calibration: 98 gases preloaded, plus gas composition firmware.

These units are incredibly fast and inherently linear, offering a typical 100 ms response time.

Accuracy is superior, at  $\pm(0.8\% \text{ reading} + 0.2\% \text{ full scale})$ .

Built in Totalizer function.

MATHESON affords the user the ability to mix and match components to achieve a customized system. Listed below are the individual model numbers for the transducer assemblies for MATHESON'S Mass Flow Meters and Mass Flow Controllers.

Can be used with the 8284B four channel Dynablnder Plus, or 827A single channel, or BB9 nine channel breakout box, or as a standalone with additional power supply listed below.

#### Materials:

- 303 & 302 Stainless Steel, Viton®, Heat Cured Silicone Rubber, Glass Reinforced Polyphenylene Sulfide, Heat Cured Epoxy, Aluminum, Gold, Brass, 430FR Stainless Steel, Silicon, Glass.
- Standard Seals: Viton
- Cable Connector: 8-pin-mini-DIN
- Minimum Differential Pressure: 1 psid
- Maximum Operating Pressure: 150 psig
- Temperature Range: 0° to 50° C (32° to 122° F)
- Accuracy:  $\pm(0.8\% \text{ reading} + 0.2\% \text{ full scale})$

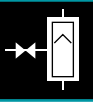
#### Ordering Information

##### Standard Model Numbers:

Flow Meter Model Number	Flow Controller Model Number	Range in Nitrogen @ 20°C and 14.7 psia	Standard End Fittings*
SEQ 8194052T	SEQ 8294052T	0-5 sccm	1/8" Swagelok
SEQ 8194112T	SEQ 8294112T	0-10 sccm	1/8" Swagelok
SEQ 8194212T	SEQ 8294212T	0-20 sccm	1/8" Swagelok
SEQ 8194512T	SEQ 8294512T	0-50 sccm	1/8" Swagelok
SEQ 8194124T	SEQ 8294124T	0-100 sccm	1/4" Swagelok
SEQ 8194224T	SEQ 8294224T	0-200 sccm	1/4" Swagelok
SEQ 8194524T	SEQ 8294524T	0-500 sccm	1/4" Swagelok
SEQ 8194134T	SEQ 8294134T	0-1 slpm	1/4" Swagelok
SEQ 8194234T	SEQ 8294234T	0-2 slpm	1/4" Swagelok
SEQ 8194334T	SEQ 8294334T	0-3 slpm	1/4" Swagelok
SEQ 8194534T	SEQ 8294534T	0-5 slpm	1/4" Swagelok
SEQ 8194144T	SEQ 8294144T	0-10 slpm	1/4" Swagelok
SEQ 8194244T	SEQ 8294244T	0-20 slpm	1/4" Swagelok

Model Number	Description
SEQ PS24V1A	Spare wall transformer
SEQ FTR033215	Filter, 15 micron, 1/4" compression, for flows 1 slpm and lower
SEQ FTR033260	Filter, 60 micron, 1/4" compression, for flows >1 slpm up to 20 slpm
SEQ FTRELE15	Replacement filter element, 15 micron
SEQ FTRELE60	Replacement filter element, 60 micron
SEQ FTRGSKSS	Replacement gasket for filter housing
SEQ CNN0107SA	Port connector, connects filter to 1/4" compression inlet fittings
SEQ CON0475SA	Port connector, connects filter to 1/8" compression inlet fittings

\* Other fitting types and sizes can be ordered.



## Configuring the 829 / 819 Model Code

Use the MATHESON Type 829 Mass Flow Controller (MFC) when both gas flow control and measurement are required. The instrument is available with the flow control valve in a normally closed configuration. Use the MATHESON Type 819 Mass Flow Meter (MFM) when only gas measurement is required. The desired instrument and options are identified in the model code when you order the unit. All parts of the product code apply to both the mass flow controller and the mass flow meter.

### Ordering Information

	Model Series	Flow Range	Fitting Size	Fitting Type
Model Number SEQ	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>

#### MODEL SERIES

Mass Flow Controllers up to 20 slpm: **829**  
 Mass Flow Meters up to 20 slpm: **819**

#### RANGE IN N<sub>2</sub>

**4 0 5** = 5 sccm  
**4 1 1** = 10 sccm  
**4 2 1** = 20 sccm  
**4 5 1** = 50 sccm  
**4 1 2** = 100 sccm  
**4 2 2** = 200 sccm  
**4 5 2** = 500 sccm  
**4 1 3** = 1000 sccm  
**4 2 3** = 2000 sccm  
**4 3 3** = 3000 sccm  
**4 5 3** = 5000 sccm  
**4 1 4** = 10 slpm  
**4 4 4** = 20 slpm

#### FITTING SIZE

**2** = 1/8"  
**4** = 1/4"

#### FITTING TYPE

**T** = Compression  
**P** = NPT female

#### Examples of 829 and 819 model codes

To order the Type 819 Mass Flow Meter with a 10 slpm full scale range, 1/4" compression fittings, the product code is:  
**SEQ 8194144T**

To order the Type 829 Mass Flow Controller with a 500 sccm full scale range, 1/8" NPT female, the product code is:  
**SEQ 8294522P**