



# Model 8284A Dynablender-Plus

## 4 Channel Mass Flow Digital Controller / Readout

New with 4 x 20 Character Easy to Read OLED Display



### Description

The MATHESON Model 8284A is a state-of-the-art, microprocessor-based, high performance readout for mass flow meters & controllers. The 8284A has an integral  $\pm 15$  VDC @ 250 mA power supply, per channel, for sensor power. It accepts 5 VDC or 4-20 mA input signals, user selectable, that can be digitally calibrated and displayed in engineering units for flow, i.e. sccm or slpm. Calibration can be performed using the front panel pushbutton switches or via the RS-232 or RS-485 serial com ports.

The 8284A utilizes a Real Time Operating System (RTOS) for real time Multitasking capabilities. This allows continuous monitoring of each channel's flowrates, total flow and set points regardless of the task being performed. A 16-bit multi-channel, high speed sigma-delta analog-to-digital converter provides accurate flowrate data. A 32K x 8 battery backed RAM stores all pertinent data required to re-initialize the system after power-up.

Ratio control is user selectable for master/slave (gas blending) operation. Channel 1 is always the master and any of the other 3 channels may be set as slaves. The master/slave arrangement utilizes the actual flowrate of Channel 1 as the master signal.

A set point signal is used with flow controllers to generate an analog control signal. A 0-5 VDC or 4-20 mA, user selectable, set point signal is generated, scaled proportionally to the full scale CAL value. The user simply sets the set point value via the front panel switches or using the serial communication port and the 8284A does the rest.

### Features & Benefits

- Microprocessor-based smart readout, power supply and controller
- Designed specifically for Mass Flowmeters and Mass Flow Controllers
- (2) alarm set points (1) high and (1) low for each channel activate opto-isolated, open collector transistor outputs for driving relays

### Ordering Information

Model Number	Description
SEQ 8284A	8284A 4 Channel controller w/ 8' cable, 15 pin "D" x RJ-45 connector

### Individual Cables and Additional Signal Cable Lengths 15 PIN "D" x RJ-45 TRANSDUCER CONNECTOR

Model Number	Cable Length
SEQ CBL053508	8 ft (STANDARD CABLE)
SEQ CBL053625	25 ft
SEQ CBL053750	50 ft
SEQ CBL0538100	100 ft

- 100/115/230 V~ rear panel switch selectable power inputs
- Rack or bench mountable using the retractable stand
- CE compliant to EN61010-1:2010, EN61326-1:2006:2013, EN55011:2009/A1:2010
- $\pm 15$  VDC @ 250 mA sensor power for each of (4) MFC's
- 4-Channel flowrate or totalizer display
- Gas blending (master/slave) mode
- Gas correction scale factor input
- Valve override (on/off) signals (depending on which model controllers are used with the 8284A)

### Specifications

#### INPUTS

Number of Inputs	4
Signal Type	0-5 VDC, +/-10 VDC, 4-20 mA

#### SET POINT OUTPUTS (EACH CHANNEL)

Signal Type	0-5 VDC, +/-10 VDC, 4-20 mA
Accuracy	+/-0.05% Voltage, +/-0.1% current
Analog-to-Digital Converter	
Technique	Sigma Delta
Resolution	16-bits Bi-Polar
Speed	100 Hz (max)

#### TOTALIZER (EACH CHANNEL)

Technique	Integrated (Riemann Sum) Value
Time Base (Quartz)	20 MHz
Accuracy	+/-30ppm (typ)
Display	999,999 (max)

#### MASTER/SLAVE (GAS MIXING MODE)

Master	CH1 Flow Signal
Slave	CH2, CH3, CH4 (user selectable)

#### UNITS OF MEASURE AND GAS ID

Units of Measure	66 stored units of measure
Gas ID	191 stored Gas ID

#### VALVE OVERRIDE SIGNALS (DEPENDENT ON MFC MODELS)

Front Panel Switch	Valve ON (Purge) Not active on 829 series controllers
Activated controllers	Valve OFF (Close) Not active on 829 series controllers
Run (Uses Setpoint)	

#### MICROPROCESSOR

Type	80 C32
Speed	20 MHz
Operating System	RTOS with multitasking
Non-Volatile Memory	32 k x 8 battery backed ram

#### SERIAL COMMUNICATIONS

RS-232	Bi-Directional
RS-485	Full Duplex
Baud Rates	9600 or 192 k baud

#### MFC POWER SUPPLY (EACH CHANNEL)

Voltage	+15 VDC, -15 VDC
Current	250 mA each

#### INPUT POWER

Voltage	100/115/230 V~
Current	500 mA (typ)

#### FUSE

1 amp slow blow (time delay)