



## AW FLOW METERS

# EMO-3000 Multi-Channel Flow Computer



### Technical Specifications:

- Standard 4 channels - expandable to 12
- 10 point linearization per channel
- RS-232 or RS-485 serial I/O interface
- Maintain a steady flow rate
- Thirty engineering units selectable
- Ratio - Flow A, Flow B or Flow A/B
- 4-20 mA or 0-5 V Output
- Program channel for 4 alarm limits

### **What is an EMO-3000 Multi-Channel Flow Computer?**

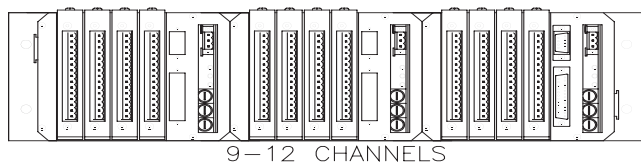
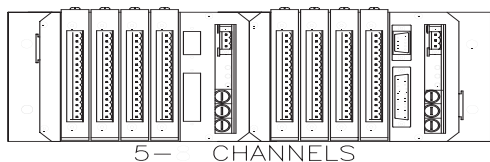
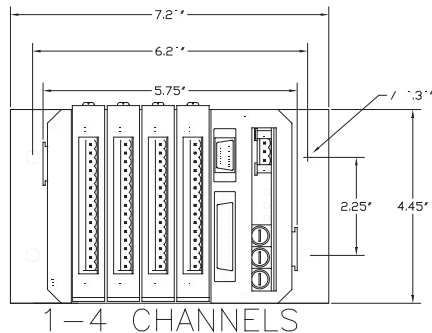
The standard EMO-3000 offers one to four channels, but is expandable to up to 12 channels. Each channel can be configured as a flow monitor or as a closed loop controller. Four alarm limits can be programmed for each channel indicating rate, total, or ratio conditions. The ratio function allows the display of flow rate A, flow rate B and ratio A/B up to 12 channels. The DM-3000 is a backlit digital display that can show 12 channels simultaneously. The display values can be programmed in over 30 different selectable engineering units. The RS-232 or RS-485 Serial I/O interface allows for remote data collection, programming and PLC interface, allowing for multi-unit interfacing. Any channel card can be configured to provide closed loop feedback flow control. This is important in automatic systems where flow rate deviations can rapidly result in major rework, labor and material costs. The self teaching memory function remembers previous "learned" control values.



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## EMO-3000

### Multi-Channel Flow Computer



#### DM-3000 Display Screen Options

##### Display Screens

- F1 \*Action Display
- F2 \*Single Channel PID
- F3 Single Channel Ratio
- 1 \*Action Ratio
- 2 Quick Programming
- F4 Full Programming
- F5 Search Feature
- F6 Utility Feature

##### \*Featured Displays

##### Single Channel Display 1-PID Mode

```

PID MODE DSP 01 CHANNEL=03
RATE=000235.ccm FLUID NBR=00
SET =000235.ccm mA OUTPUT=11.81
TRANSPARENT-> OFF
HOLD ANALOG-> OFF
HOLD TOTAL-> OFF
SET REACHED-> ON
F1=ESC F2=CHNL UP F3=CHNL DOWN F5=D+
    
```

##### Action Ratio Display

CHA	RATE_A	RATE_B	RATIO
01	023.7ccm	021.2ccm	01.12
02	045.4ccm	035.2ccm	01.41
03	000.0ccm	000.0ccm	01.00
04	000.0ccm	000.0ccm	01.00
05			
06			

F1=ESC F2=CH-SWAP F3=D+ F4=RESET TOT

##### Flow Rate Display

CHN	RATE	CHN	RATE
01	562.8ccm	07	498.7ccm
02	459.2ccm	08	000.0ccm
03	487.2ccm	09	000.0ccm
04	523.8ccm	10	482.4ccm
05	631.4ccm	11	607.4ccm
06	524.5ccm	12	000.0ccm

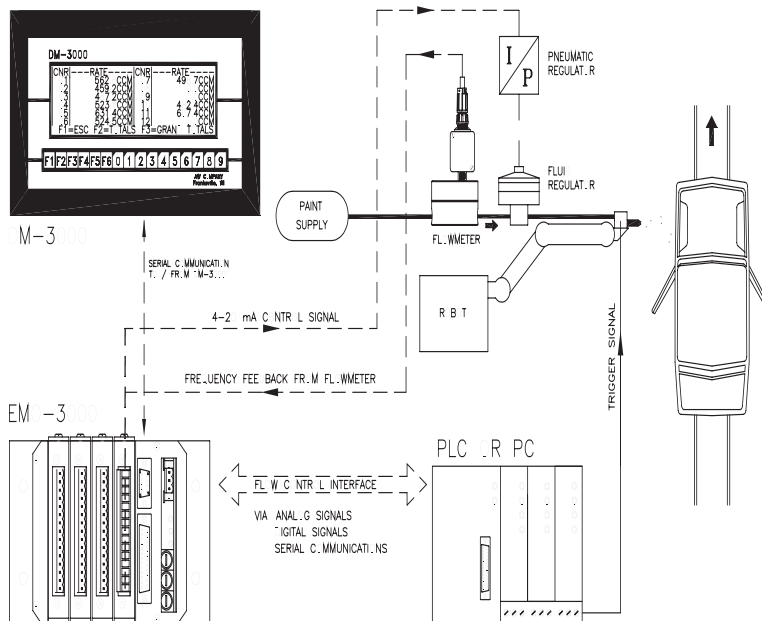
F1=ESC F2=RATE F3=TOTAL F4=GRAND TOTAL

### CLOSED LOOP CONTROL SYSTEM FOR PAINTS AND COATINGS

- Objective:** #1 Maintain a precise flow  
 #2 Monitor material quantities used  
 #3 Improve quality and reduce waste
- Equipment:** EMO-3000 or DM-3000  
 AW brand positive displacement meter

The PLC transmits fluid flow instructions to the EMO-3000 unit, which in turn controls an air-operated fluid regulator by regulating pneumatic pressure. The AW flow meter measures the flow to the paint nozzle by converting flow to a proportional pulse rate, which is then compared with the set value furnished by the PLC\*. An error between the set value and the actual flow rate results in a corrective signal to the AW I/P converter. An internal memory feature records flow values from earlier cycles which are continuously modified as new conditions occur. The EMO-3000 builds these adaptive data tables for up to 30 fluids or colors, ensuring a fast but highly precise response for a wide variety of fluids and conditions.

\*Potentiometer and DM-3000 programmed set points are acceptable.



Products may be subject to change without notice – Contact factory for current information