

## Series 700 Analog Output Options Suffix MA, MB, and MC

- ✓ **Convert Analog Voltage Output to Current (MA & MB)**
- ✓ **Unidirectional and Bidirectional Modes (MA)**
- ✓ **Shift Analog Output by 5V (MC)**
- ✓ **20  $\mu$ A Maximum Error (including temperature effects)**
- ✓ **Can be User Installed and Removed**

These options convert one analog voltage output to a current output (MA or MB) or shift the analog output voltage by 5V (MC). Jumpers on the MA option select either the 4-20 mA unidirectional or the  $12 \pm 8$  mA bi-directional mode. The MB option is fixed at  $10 \pm 10$  mA and the MC provides  $5 \pm 5$  V. A Model 700 Instrument with one installed MA or MB Option has one analog current output and one analog voltage output. Each may be assigned to any of the instruments two, or

three, data channels. For dual analog current outputs, specify two of the output options using a 2MA or 2MB suffix. For critical control channels or for other applications where a single data channel requires dual, buffered analog outputs, both analog outputs can be assigned to that data channel. Any of these options can be installed or removed in the field. MA and MB current outputs are infinite impedance current sources. Specifications are shown in the table below:

	Option Suffix			
	MA (current output)		MB (current output)	MC (voltage output)
	Unidirectional	Bidirectional		
<b>Output</b>	4-20 mA	$12 \pm 8$ mA	$10 \pm 10$ mA	$5 \pm 5$ V
<b>Resolution</b>	$6.4 \mu$ A	$3.2 \mu$ A	$4 \mu$ A	2mV
<b>Overrange</b>	0.8 to 23.2 mA	$12 \pm 11.2$ mA	0 to 23.2 mA	0 to 12V
<b>Overall Error</b> <small>(Includes temperature effects)</small>	$\pm 20 \mu$ A	$\pm 10 \mu$ A	$\pm 12 \mu$ A	$\pm 6$ mV
<b>Load Resistance</b>	0 to 200 $\Omega$ , maximum		0 to 500 $\Omega$ , max	10k $\Omega$ min
<b>Output Filter</b>	100Hz, 5 pole Bessel response low pass filter			
<b>Protection</b>	overvoltage (0.25A fuse) protected to $\pm 130$ VDC (or 130VAC)			

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