



# M334

## 4-20 Milliamp Loop Calibrator

The Meriam M334 is a state of the art, highly reliable, rugged and easy to use milliamp calibrator. It has the functions necessary to perform all the required maintenance and calibration tasks of virtually any 4-20mA loop. It provides source and read milliamp functions along with power and measure; and two wire transmitter simulations. In addition it can measure DC Voltage for troubleshooting power supplies.

The M334 is functionally equivalent to similar calibrators with many additional benefits. These improvements include better long term stability, accuracy, reliability and ruggedness including significantly improved battery life. The combined improvements allow the Meriam M334 to meet or exceed all of the expected performance and functions of similar products.

The M334 will also exceed the performance of many higher cost calibrators and meet today's most demanding requirements while maintaining the familiar, time proven reliability and ease of use of similar calibrators. This is the new standard!

### M334 Advantages

#### All milliamp (mA) loop functions

- Source 0.00 to 24.00 mA (-25.0% to 125.0%)
- Read 0.00 to 52.00 mA (-25.0% to 300.0%)
- Simulate 2-Wire Transmitters
- Power and measure 2-Wire Transmitters

#### Accuracy to better than 0.025% ( $\pm \frac{1}{2}$ LSD)

- Within  $\pm 0.005$  mA from 4.00 & 20.00 mA EZ-Checks

#### Large high contrast graphic display

- Viewable in all lighting conditions and angles

#### Read voltage function

- Read 0.00 to  $\pm 99.99$  VDC

#### EZ-Dial knob

- Easily adjust output by 0.01 mA (0.01%)

#### EZ-Check 3-position slide switch

- Instantly output 4.00 or 20.00 mA calibration values
- Adjustable in all 3 positions for easy valve testing
- Rugged, unbreakable with splash protection

#### Uses 4 standard "AA" alkaline batteries

- Battery life up to 70 hours of normal usage
- Easily accessible battery compartment

#### Overload protected

- 135 vrms Protection
- Fuse-less Protection from accidental misconnection

#### Compact, lightweight and rugged

- Small in size with heavy protective rubber boot

#### Rechargeable battery option available

- One hour rapid charger with four (4) NiMH Batteries
- Kit includes an AC adaptor and a car adaptor for charging on the go



## 4-20 Milliamp Loop Calibrator

### Source/Power & Measure Two Wire Transmitters

<b>Ranges &amp; Resolution</b>	0.00 to 24.00 mA Full Span or -25.0 to 125.0% of 4-20 mA
<b>Accuracy</b>	
EZ Check(s) at 4 & 20mA <sup>(1)</sup>	$\leq \pm 0.025\%$ of Span at 4.00 mA & 20.00 mA ( $\pm 0.005$ mA)
0.0 to 24.00 mA	$\leq \pm 0.05\%$ of 24.00 mA Span ( $\pm 0.01$ mA)
Noise	$\leq \pm 0.005$ mA of Reading
<b>Temperature Effect</b>	$\leq \pm 0.005\%$ / °C of FS
<b>Loop Compliance Voltage</b>	$\geq 24$ DCV @ 20.00 mA
<b>Loop Drive Capability</b>	1200 $\Omega$ at 20 mA for 15 hours nominal
<b>Battery Life</b>	Source and Power measure mode $\geq 30$ hrs at 12 mA nominal



### Additional Specifications

Read mA	
Ranges	0.00 to 52.00 mA Full Span OR -25.0 to 300.0% of 4-20 mA
<b>Accuracy</b>	
Below 24.01 mA	$\leq \pm 0.05\%$ of 24.00 mA ( $\pm 0.01$ mA)
Above 24.00 mA	$\leq \pm 0.05\%$ of 52.00 mA ( $\pm 0.02$ mA)
Voltage burden	$\leq 2$ V at 50 mA
Overload/Current limit protection	54 mA nominal
Battery life	Typical $\geq 125$ Hours nominal
2-Wire Transmitter Simulation	
Accuracy	Same as Source/Power & Measure
Voltage burden	$\leq 2$ V at 20 mA
Overload/Current limit protection	24 mA nominal
Loop voltage limits	2 to 100 VDC (fuse-less protected from reverse polarity connections)
Battery life	$\geq 125$ hours nominal
Voltage Read	
Range and Resolution	-99.99 to +99.99 VDC Full Span (FS)
Accuracy	$\leq \pm 0.05\%$ of FS
Temperature effect	$\leq \pm 100$ ppm/°C of FS
Input resistance	$\geq 2$ M $\Omega$
Battery life	$> 125$ hours nominal

### Specifications

Operating Temperature Range -20 to 60°C (-5 to 140°F)

Storage Temperature Range -30 to 60°C (-22 to 140°F)

Relative Humidity Range 10%  $\leq$  RH  $\leq$  90% (0 to 35°C), Non-condensing  
10%  $\leq$  RH  $\leq$  70% (35 to 60°C), Non-condensing

Size L=5.63 x W=3.00 x H=1.60 inches

Weight 12.1 ounces (including boot & batteries)

Batteries Four "AA" Alkaline 1.5V (Duracell MN1500 or equivalent)  
**Optional 120 VAC 50/60 Hz AC adaptor available NiMH Rechargeable battery kit available**

Miscellaneous Low battery indication with nominal 1 hour of operation left  
Over-voltage protection to 135 vrms (rated for 30 seconds) or 240 vrms (rated for 15 seconds)  
High contrast graphic liquid crystal display with 0.413" (10.5 mm) high digits