



Applied Resources, Inc.
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ACCURACY

UTILITY

VERSATILITY

PRICE

MODEL AK10 / mA Loop Calibrator

Multiple Operating Modes

- Source and Measure 0 - 22 mA
- Simulate 2-Wire Transmitters
- Power and Read 2-Wire Transmitters
- Measure 100 DC Volts
- Test a loop for the presence of properly installed intrinsic safety barriers

Unbeatable accuracy

.015% of reading with 1 uA resolution

Easy to use functions assist calibration

- Ramp Function: adjustable amplitude, rate of travel and soak time.
- Step Function: automatic or manual stepping through up to 100 calibration points.
- Scale Function: display reading as % or any other linear scale.
- Data Logging: (optional) automatic or manual logging of over 1400 readings for later review. Upload to a PC for trend analysis.

Menu driven operation

- 32 character display, 16 key tactile keypad. All functions have user-friendly operator prompts.
- No user's manual needed !*

Long battery life

- 4 user-replaceable AA batteries provide months of typical use. Both alkaline and rechargeable NiCd are suitable.

Reprogrammable Flash Memory !

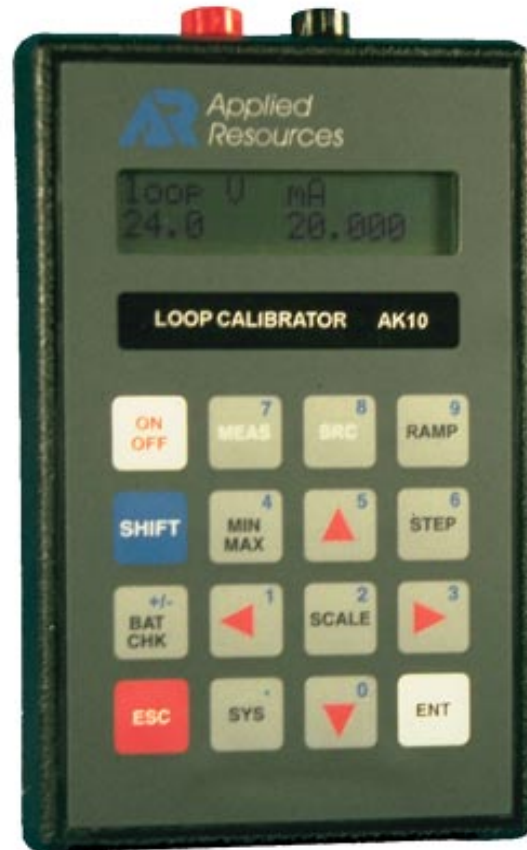
- A first of its kind innovation! Firmware updates and enhancements can be downloaded to the calibrator from the Internet.

Fuseless overload protection

- Withstands 125 Volts AC without damage

Our Model AK10 mA Loop Calibrator has been designed to include everything a technician needs to check, calibrate and trouble shoot a standard 4-20 mA process control loop.

SOURCE from 0 to 22 mA into any load from 0 to 1000 Ohms with .015% accuracy and 1 uA resolution. Additionally the loop resistance will be measured and displayed. The STEP function manually or automatically steps the output at any user-specified interval to allow one man to set zero/span, or run linearity checks. The RAMP function slews the output from one setpoint to another to assist a technician in checking valve travel, actuator performance, or chart recording.



POWER AND MEASURE 2-Wire Transmitters. The AK10 supplies the voltage and simultaneously displays the current as regulated by the 2-Wire Transmitter.

SIMULATE the operation of a 2-Wire transmitter by modulating external power to pass 0 to 22 mA. Additionally the loop voltage will be measured and displayed.

MEASURE 0 to 22 mA or 0 - 100 Volts DC, display the reading as %, recall minimum and maximum readings, or automatically store them in the datalog (optional) at user-specified intervals to review and upload later.

TEST a loop for the presence of properly installed intrinsic safety barriers with our exclusive LOOP CHECK function. This function runs an automated test to determine certain electrical characteristics of the loop such as the Open Circuit Voltage, Short Circuit Current and Loop Resistance. These measurements will assist a technician in determining if a loop meets intrinsic safety standards.

Specifications:

Mechanical

Size: 5.6 x 3.6 x 1.3 inches
Weight: 12 oz. (0.35 kg)

Environmental:

Operating Temperature: 0 to 50 °C
Storage Temperature: -20 to 60 °C
Temperature effect: +/- .001% / °C
Relative Humidity: 10% to 90% non-condensing.

Power:

Batteries: 4 replaceable AA cells,
alkaline or NiCd rechargeable.
Battery Life: Source 12 mA for 40 hours
Read/Simulate for 145 hours.
Overload Protection: Protected to 125 Volts
(fuseless)

Modes:

	Accuracy 1	Resolution	Range
SOURCE mA	0.015%	1 uA	0.1 - 22 mA into 1000 Ohms
SIMULATE mA	0.015%	1 uA	0.1 - 22 mA 48V max
MEASURE mA	0.015%	1 uA	0 - 22 mA
MEASURE Volts	0.015%	10 mV	0 - 100 VDC

¹ Accuracy is % of reading + 1 least significant digit @ 15-35 °C.

Functions:

STEP: automatic / manual stepping through up to 100 calibration points with optional soak-time.
RAMP: mA output ramp with adjustable amplitude, travel time and soak time.
SCALE: display reading as % or any other user-definable linear scale.
MIN/MAX: store and recall minimum, maximum, and average readings.
DAMPING: select signal damping to dampen otherwise unstable signals.
BATTERY SAVE: When enabled, turns calibrator off after 30 minutes of inactivity.
BATTERY CHECK: Displays battery voltage.
DATA LOG: (optional) automatic or manual logging of over 1400 readings for later review. Upload to PC for trend analysis.
JOURNAL: (optional) When enabled, transmits current reading over the RS232 port at user-specified intervals.

Warranty

Applied Resources products are warranted to be free from all latent defects in material and workmanship under normal use and service. Should any of our products be found to be defective within one (1) year from date of shipment, Applied Resources will replace, repair or adjust the equipment at our option. The defective product shall be sent to the Applied Resources manufacturing facility with all transportation charges prepaid.

Accessories & Ordering Info

The AK10 mA Loop calibrator comes with test leads, User's Guide and 4 AA alkaline batteries.

MODEL AK10 mA Loop Calibrator	AK-10
CARRYING CASE (optional)	AK-5
RS232 INTERFACE (optional) ²	AK-6
DATALOG/JOURNAL (optional) ^{1,2}	AK-7

¹ DATALOG/JOURNAL option can be purchased with the original unit, or purchased and activated at any time after purchase of original unit. All calibrators ship with this option present but disabled. Once this option is purchased, a numerical code is given over the phone to permanently enable the option.

² The RS232 INTERFACE option is required to upload records from the DATALOG or to download new firmware to the calibrator.

For more information, visit our website at;

WWW.CALIBRATOR.COM