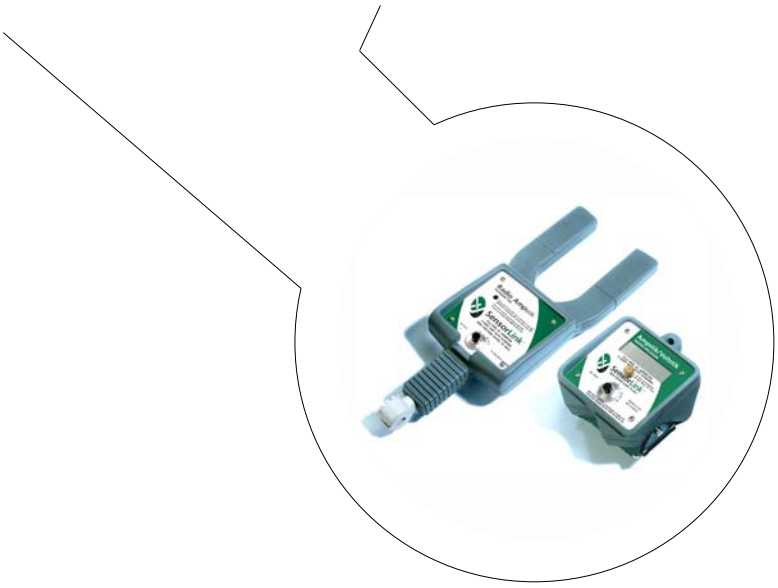


Operators Manual

True RMS Radio Ampstik

Radio Linked Multiple Reading Ammeter

Model 6-120

SensorLink®

Model 8-120
Sensor Transmitter Meter

Model 8-121
Receiver Display

Operators Manual

True RMS Radio Ampstik

Radio Linked Multiple Reading Ammeter

Model 6-120

Table of Contents

Safety Information

The True RMS Radio Ampstik is designed for use with a suitable universal hot stick. All precautions appropriate for the line voltage should be taken. The hot stick should be considered the sole voltage isolation device. For safety purposes the face plate, battery cover, chuck, and entire Radio Ampstik Transmitter should be considered to be at the same potential. Putting the face plate, battery cover, chuck, or other parts of the Radio Ampstik Transmitter within the air gap of adjacent phases or ground could cause a phase to phase or phase to ground fault.

Specifications

The True RMS Radio Ampstik has been developed specifically for measurement of AC current in the electrical utility industry. The True RMS feature allows accurate measurement of current even when the nominal waveform is distorted or when harmonics are present. This may be the case with Y connected transformer neutral leads and distribution to many industrial customers using SCR controllers and other switching devices. This instrument can be used remotely with any hotstick and universal chuck adapter or can be hand held. The instrument has no moving parts and does not require clamping onto the wire. The case is water resistant and will withstand high physical impact. The following specifications apply:

Model Number	6-120 (Includes both 8-120 Sensor Transmiter & 8-121 Receiver Display)
Range of Operation	
Voltage	0-69kV
Current	1-5000A
Frequency	60 Hz (57 to 63 Hz) or 50 Hz (47 to 53 Hz) Actual Frequency indicated on back of meter
Sensor Opening	Standard
Opening Width	2.50 in (6.35 cm)
Resolution	
Amps 1-99.9A	0.1A
Amps 100-5000A	1A
Accuracy	± 1% ± 2 Digits
Operation Controls	One button operation
Mechanical	
Weight	2.5 lbs. 1.14 kg.
Operating Temperature	0° to +54° C (32° to +129° F)
Display	5 Digit Display
Storage	Four Readings
Housing	Shock & water resistant molded urethane
Hotstick mounting	Universal chuck adapter (Hotstick not included)
Battery	9 volt alkaline or lithium (1 ea in Transmitter & Receiver)*
Battery Life	5 days continuous use*
Radio	
Frequency	916.48MHz
Power	.1 milliwatt
Range	50 Feet (15.24 Meters)

Low and High Temperature Applications

The Alkaline Battery limits the operation of the Radio Ampstik from -20°C (-4°F) to 54°C (129°F) By substituting a Lithium long-life battery the Radio Ampstik can operate from or-30°C (-22°F) to 60°C (140°F)
9 volt Lithium batteries are the same long-life batteries used in smoke detectors. They sell by the brand names UltraLife and Energizer.

Note:

Alkaline operating time reduced to 25% at -4° F or -20° C
Lithium operating time reduced to 75% at -4° F or -20° C

Operating Instructions

1 Turning on the Radio Ampstik

To take a measurement, both the Transmitter Sensor and the Receiver Display need to be powered on.

Turn on the Radio Ampstik Transmitter. Press and release the on/off/hold switch on the Radio Ampstik Transmitter. The LED on the Transmitter Sensor will flash, indicating that it is powered on.

Turn on the Ampstik/Voltstik Receiver. Press and release the on/off/hold switch on the Radio Ampstik Receiver. The receiver is designed to operate with both the Radio Ampstik as well as the Radio Voltstik. Choose the mode for the Radio Ampstik by pressing and releasing the button when the Ampstik mode is shown. The Receiver Display will display "noSiG" until the Transmitter Sensor communicates to it.

Ampstik Voltstik

2 RUN Mode (Default Mode)

The reading continuously changes as the current changes

The unit is immediately in the RUN mode after powering on. To take measurements with the Radio Ampstik in the RUN mode, place the conductor between the two arms and observe the reading on the Receiver's display. For maximum accuracy, be sure that the conductor is below the notches on the arms. If the conductor cannot be placed below the notches, readings can be taken but the accuracy may be lessened.

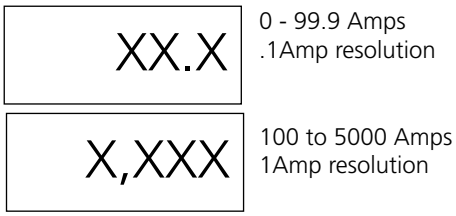
3 To HOLD a Reading

Press and release the button when the desired reading is diplayed. The Receiver will hold the reading in the display and store the reading in the Receiver's memory. After three seconds, the receiver will return to the RUN mode. The Receiver can hold up to four readings. All held readings will be stored in the Receiver's memory until they are erased, or until the receiver is powered off.

4 To review a HELD Reading

Press and hold the control switch on the Receiver Display and scroll until HELD appears on the display. The number of the reading that is being viewed will flash in the upper left corner of the display. To scroll to the next reading, press and release the control switch. Repeat this to scroll through all the readings.

Note: The display resolution changes on the following ranges:



5 ERASE Mode - Clearing the stored measurements

You must first go to the ERASE mode to clear the stored readings before taking further readings. Press and hold the control switch on the Receiver Display, the ERASE option will appear: release the control switch. After running the ERASE mode, all of the data will be cleared, and the Display will be in the RUN mode. The data will also clear when the OFF mode is selected. If the instrument has four readings in its memory and another attempt is made to take a reading, the display will show **"FULL".**

6 Turning the instruments OFF

Receiver:

Press and hold the control switch on the Receiver Display and scroll to the OFF option. Release the control switch.

Sensor Transmitter:

Press and hold the control switch until the LED goes to solid RED. Release the control switch.

The Radio Ampstik Receiver Display will turn off automatically after 60 minutes of inactivity. The Radio Ampstik Transmitter will turn off automatically after 20 minutes of inactivity.

High Voltage Operation

This instrument is designed to operate in high voltage fields. However, difficulty may be experienced when excessive corona to the instrument occurs. This may occur when the line voltage is greater than 69 kV phase to phase. The unit may experience over range and require power to be cycled or may lose a reading when in the sample and hold mode.

Battery Replacement

The Radio Ampstik is powered by a two 9V batteries, one in each unit. When the "LO BAT" indication shows on the Receiver Display, the batteries in both the Receiver Display and the Transmitter Sensor should be replaced. They will continue to operate for a few hours.

Transmitter Sensor: Remove the four screws on the battery cover at the rear of the unit. Carefully insert a screwdriver blade in the notch and pry the cover out, being careful not to damage the cover seal. Pull the battery out of the compartment and separate the battery from the battery connector. To avoid breaking the battery leads do not pull on the battery only. Install a fresh battery and reinsert the battery in its compartment. Reinstall the cover by gently pressing it into place while pulling out on the edges of the compartment, and reinstall the four cover screws. Take care to avoid overtightening the screws. Always reuse the screws provided and do not damage or lose the o-ring seal on each screw.

Receiver Display: **DO NOT unscrew the four screws on the corners of the front panel.** Loosen the thumb screw, located on the front middle of the unit. Remove the old battery. Snap the fresh battery to the connector and insert into the battery slot. Replace the cover plate. Be sure the antenna fits into the hole in the rear of the case. Tighten the thumb screw.

Cleaning

The Radio Ampstik can be cleaned by wiping with a small amount of alcohol on a rag.

SensorLink Corporation Warranty

SensorLink warrants each instrument it manufactures to be free from defects in materials and workmanship under normal use and service for the period of one year after date of shipment. Within this period, SensorLink agrees to repair or replace, at SensorLink's option, any instrument that fails to perform as specified. This Warranty shall not apply to any instrument that has been:

1 Repaired, worked on, or altered, including removal of the front panel, by persons unauthorized by SensorLink in such a manner as to injure, in SensorLink's sole judgment, the performance, stability, or reliability of the instrument;

2 Subjected to misuse, negligence, or accident; or

3 Connected, installed, adjusted, or used otherwise than in accordance with the instructions furnished by SensorLink.

This Warranty is in lieu of any other warranty, expressed or implied. SensorLink reserves the right to make any changes in the design or construction of its instruments at any time, without incurring any obligation to make any change whatever in units previously delivered.

SensorLink's sole liabilities, and buyer's sole remedies, under this agreement shall be limited to a refund of the purchase price, or at SensorLink's sole discretion, to the repair or replacement of any instrument that proves, upon SensorLink's examination, to be defective, when returned to the factory, transportation prepaid by the buyer, within one year from the date of original shipment. SensorLink shall in no way be liable for damages consequential or incidental to defects in any instrument, for failure of delivery in whole or in part, for injuries resulting from its use, or for any other cause.

If a failure occurs, contact the manufacturer for a Return Authorization and instructions for return shipment. This warranty constitutes the full understanding of the manufacturer and buyer, and no terms, conditions, understanding, or agreement purporting to modify or vary the terms hereof shall be binding unless hereafter made in writing and signed by an authorized official of SensorLink.

Quality Assurance Certification
True RMS Radio Ammeter
Models 8-120 and 8-121

SensorLink certifies that its calibration measurements are traceable to the National Institute of Standards and Technology (NIST), to the extent allowed by the Institute's calibration facility, and to the calibration facilities of other International Standards Organization members.

This document certifies the following True RMS Radio Ammeter was tested at the SensorLink High Voltage Laboratory, Acme, WA, USA to the appropriate standard and comply with the requirements of that standard.

Transmitter; Model 8-120; Serial Number _____

Receiver; Model 8-121; Serial Number _____

I hereby certify that the True RMS Radio Ammeter listed above has passed all tests defined in the SensorLink standard . I also certify that I have reviewed the standard and test procedure and that they are sufficient in determining compliance with the standard.

Signed_____

Date_____

07/05
DOPM-812-001
Manual Revision V21

SensorLink® Corporation

1975 Valley Hwy 9, P.O.Box 301
Acme, WA 98220 USA
phone: 360/595.1000
fax: 360/595.1001
www.sensorlink.com