

SPECIFICATION



Armada Technologies PRO93 AC Leakage Clamp Multimeter is used by a technician to determine the general location of a ground voltage leak in a 2-Wire system. The Pro93 model measures AC milliamp current leakage down to 50 micro amps simply by using the integrated clamp over one conductor of the 2-wire cable. This is done at various points in the system, usually right at the decoder. Any drop in the milliamp current indicates a problem. In addition to milliamp readings, VAC, VDC, Ohms, and Hz measurements are available, and all utilize a built-in auto ranging function.

Also available for locating 2 wire cable paths ask us about the PRO871C

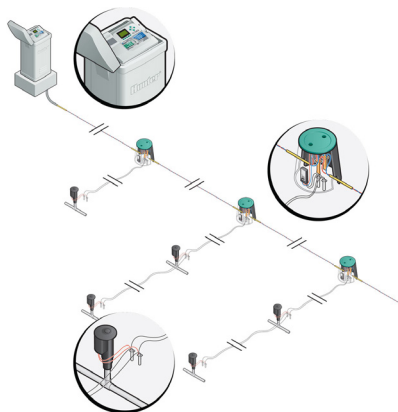
FEATURES

- Measures from 50 micro-amps
- Measures AC leakage in milliamps
- Measures AC, DC, Ohms and Hz
- Auto ranging
- 4 Digital Display, 10uA Resolution
- Auto zero
- Auto power off after 10 minutes idle
- MAX hold function
- Data hold function
- Solid design and construction



SPECIFICATIONS

- Digital Display: 4 LCD digits with a maximum reading 9999
- Over Load: "OL" is displayed when input signal exceeds measuring limit
- Sample Rate: 2 times/sec
- Low Battery Indication: Battery symbol displayed when battery is low
- Power Source: 1.5V x 2 (UM-4 or AAA size)
- Voltage: VAC to 600V, VDC to 600V
- Resistance: Up to 1000 Ohms
- Amps: Range from 50 micro amps to 10 amps
- Hertz: Volts and Amps to 1Khz
- Auto Power Off: 10 minutes
- Clamp Opening: 28mm



MODEL	CODE
Leakage current tester, with case and batteries	PRO93

Specifications Subject to Change Without Notice - Product Drawings / Images are representative only and are subject to change

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HR Products Decoder System Cable Locator - Two Wire Cable Paths - using PRO871C

HR Products recommends the use of Armada Technologies PRO871C for locating two wire cable paths for irrigation systems. The PRO871C sends out low voltage 30VAC to field. Using other locators will result in decoder damage due to high voltage being sent down the wire path, some locators will send upto 1000 vac to field.

Hunter Decoder System Troubleshooting – Two Wire Tech Tips - using PRO93

Hunter ID wire has PE jacket and does not break down in normal soils. If deteriorating cable is found check for external causes. Most cable faults are a result of the original installation, or later physical disruption to the cable.

The line will normally have between 20-36V and very low amperage. Decoder line voltage pulses at about 1.2 Hz.

Any copper to earth on the wire path will have very negative effects on operations. These usually start with decoder Comm Fault alarms (which you will see in the alarm log). Line Fault indicates a dead short between red and blue wires, or 2 copper to wet earth faults so close that they amount to a short. Line Fault really means red is connected directly to blue. In new installations, that is a somewhat common finding- it only takes one. All shorts to earth are bad, wet would be worse than dry, but one leads to the other.

Fault Locating

For correct fault locating disconnect the wire path from controller, and attach 24VAC 50Hz transformer to wires instead (do not use the controller power supply). Use the PRO93 to spot check the line (one wire at a time). Each time you pass a decoder, the current should drop about 5ma. When you see a much larger drop, you have passed a short to earth. You can back up and zero in on the short this way.

If there are tees or splices in the wire path, they are common failure points, and can also complicate wire troubleshooting. You can disconnect and cap off temporarily, to concentrate on one segment at a time.