Advanced Energy | TEGAM®

RESISTANCE MEASUREMENT

CRITICAL MEASUREMENTS FOR SAFETY, CONDUCTIVITY, AND INTEGRITY.

When the measurement matters, be certain with TEGAM.

Low-Ohm Resistance Measurements

Bond testing is used to verify mechanical and electrical bonds for safety, conductivity, and integrity, for airframes, proper ground systems, shock hazard mitigation, and electrical circuit connectors and components. Industries where these measurements are critical include:

Aerospace | Alternative Energy | Electronics | Automotive | Electrical Systems

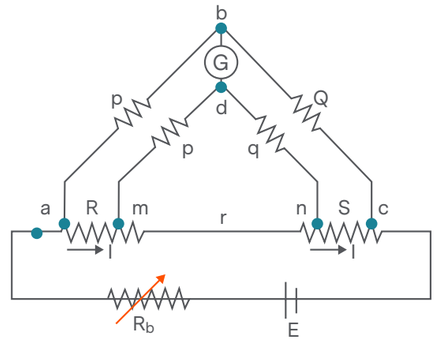
TEGAM uses the 4-wire (Kelvin sensing) method for all low-ohm resistance instruments.

- The purpose of this method is to eliminate the measurement error caused by the resistance of the probe leads.
- The Kelvin Double Bridge circuit integrates a second pair of ratio arms to proportionately divide the voltage drop.

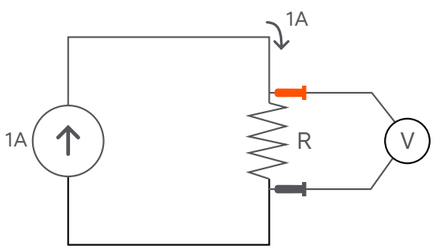
Kelvin Sensing

- A known current source is applied to the component being measured and the voltage drop is measured at the lead tips, negating any lead resistance present.
- All four measurement nodes are brought to the front of the instrument by the way of Kelvin clips or probes.
- The Drive side of the probe is the current source and the Sense side of the probe is where the voltage drop is measured.
  - The V+ (Sense) and I+ (Drive) are paired in one probe and the V- (Sense) and I- (Drive) are paired in the other.
  - When the probes are placed on either side of a component, an electric circuit is completed, and the resistance can be calculated, using Ohm's Law, as follows:

Measured Voltage ÷ Known Amperage = Component Resistance



Kelvin Double Bridge



700 SERIES | Bond Meters

730A | Wireless Datalogging

- Bluetooth LE connectivity
- Free iOS/Android app (TEGAMLink B)
- Seamless software integration
- Reduces data recording errors

720A | Intrinsically Safe

- Continuous use in the presence of flammable gases, vapors, and mists
- UL/CSA/ATEX/IECEx certified
- Also available as complete kit: 720A-BK-KIT

710A | Standard

- Also available as complete kit: 710A-BK-KIT

730A

720A

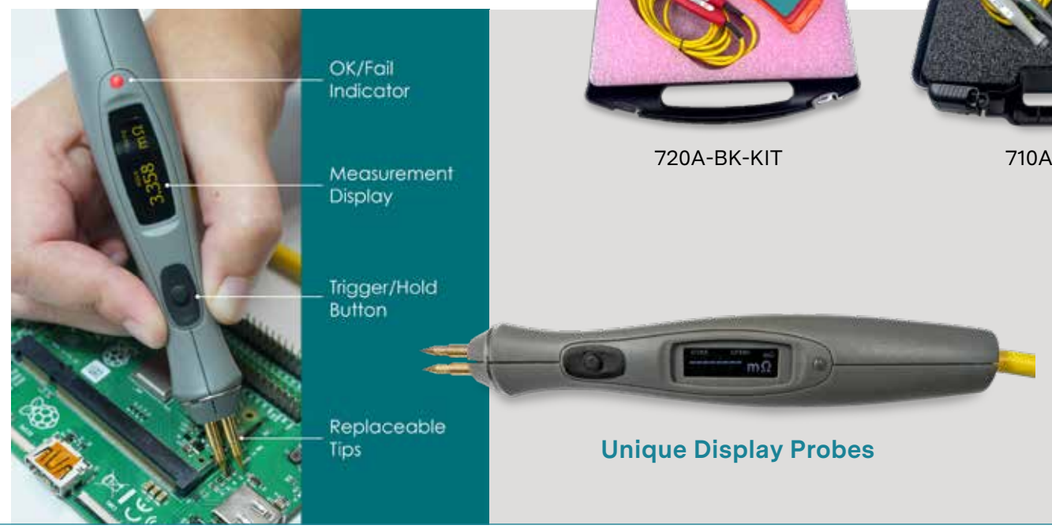
710A

COMMON FEATURES

- High accuracy: ±(0.2% rdg + 0.02% rng) Across the entire operating range
- 3 readings per second
- Ergonomic, one-hand operation
- Smooth contours, easy to clean
- Long battery life (3AA)
- Widest range of probe options

720A-BK-KIT

710A-BK-KIT



Unique Display Probes

R1L SERIES
Milli-Ohmmeters & Bond Meters

R1L-BIR
Portable Milli-Ohmmeter

- Measures 1 µΩ to 20 Ω
- Accuracy: 0.25% of reading
- Long, rechargeable battery life
- Rugged; meets MIL_PRG-28800F Class 3

R1L-D1
Milli-Ohmmeter & RTD Meter

- Measures 10 µΩ to 2 kΩ
- High accuracy: 0.05% of reading
- Measures 100 and 1000 Ω 3- and 4-wire RTDs
- Long (140 hr) rechargeable battery life
- Rugged; meets MIL-PRF-28800F Class 3

R1L-E2A
Intrinsically Safe Milli-Ohmmeter

- UL/CSA/ATEX-certified
- Measures 10 µΩ to 20 Ω
- Accuracy of 0.1% rdg + 2 cnt
- Long, rechargeable battery life
- Includes complete set of IS probes

R1M SERIES
Mega-Ohmmeters

For measuring high resistances (insulation testing)

R1M-A
Portable Mega-Ohmmeter

- Measures from 1 MΩ to 200 GΩ
- Measurement accuracy ±5%
- 50, 100, 250, 500 V Test Voltages
- Rugged, weather resistant carry case

R1M-B
Handheld Mega-Ohmmeter

- Designed to measure resistance in “live” circuits
- Measures from 1 MΩ to 200 MΩ
- Accuracy ±3%
- Measures 3 to 600 VAC RMS

ASSEMBLED IN U.S.A.

Mouser Electronics

Authorized Distributor

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Advanced Energy:

720A-BK-KIT