



## Ground Bond Meter for Potentially Explosive Work Areas

- Meets the Latest and Widest International Standards
- ATEX Ex ia IIA T4 Ga
- C-UL-US Listed Class I Div. 1, Group D
- Safely Measure Ground Bonds in the Presence of:
  - Alcohols
  - Diesel Fuel
  - Gasoline
  - Natural Gas
  - Aviation Fuels
  - Heating Oil
  - Kerosene
  - Propane
- Portable: Long Battery Life (80 Hrs of typical use on a full charge)
- Five Ranges: 2 mΩ to 20 Ω
- Accuracy: 0.1% of reading ± 2 counts
- Wide Operating Temperature Range: -20 ° C to 50 ° C
- Simple Operation
- Back Lit Display
- NSN: 6625-01-527-5543

### Intrinsically Safe

Intrinsic safety means the instrument is specifically designed and tested to prevent the release of energy that could ignite flammable liquids or gases in the work area. The Model R1L-E2A is an intrinsically safe, portable microohmmeter/bond tester for measuring low values of resistance (from 100 μΩ to 20 Ω) in these potentially explosive atmospheres.



### Applications include:

- Aircraft bond measurements for all phases of aircraft manufacturing and flight line maintenance in the presence of JP4 and aviation gasoline.
- Verifying natural gas pipe grounds and bonds.
- Checking pharmaceutical equipment grounds and storage facilities in the presence of alcohol.
- Inspecting lighting arrestors in petrochemical production and distribution facilities.

### Predictable Results

The R1L-E2A combines accurate measurement, simple operation and durable construction to provide consistent, predictable results under a challenging range of conditions. It is designed to accurately measure microohms throughout the widest operating temperature range of



any commercially available bond meter.

A rugged and waterproof case contains and protects the R1L-E2A when being transported to and from the work site. The case doubles as a storage area for the probes that are included as standard equipment with every instrument and an integral part of the intrinsic safety system.

### Is it Right for You?

The R1L-E2A was selected as the standard bond meter for the F-35 Lightning II Joint Strike Fighter after a competitive test. It goes into service with each squadron of F-35's anywhere in the world under all conditions. The combination of intrinsic safety and durability should qualify it for your bond measurements as well. If your requirements aren't quite that demanding, TEGAM manufactures a complete line of rugged and portable bond meters for your unique measurement challenge. You may see the complete line at [tegam.com](http://tegam.com).

## Specifications

Resistance Ranges and Test Currents			
Full Scale	Resolution	Accuracy*	Test Current
1.999 mΩ	1 μΩ	0.1% of Reading ± 2 Counts	1.3 A
19.99 mΩ	10 μΩ	0.1% of Reading ± 2 Counts	130 mA
199.9 mΩ	100 μΩ	0.1% of Reading ± 2 Counts	13 mA
1.999 Ω	1 mΩ	0.1% of Reading ± 2 Counts	1.3 mA
19.99 Ω	10 mΩ	0.1% of Reading ± 2 Counts	130 μA
<b>Recommended Calibration Cycle</b>	1 year		
<b>Certifications</b>			Ex ia Ila T4 Ga -20C ≤ Ta ≤ +50C DEMKO 11 ATEX 1048757X IECEX UL 11.0006X Control Drawing 13742
	Ground Indicator For Use in Hazardous Locations		
			Class I Zone 0, Group IIA Class I Division 1, Group D
Physical and Power			
<b>Operating Temperature</b>	-20° to + 50° C		
<b>Storage Temperature</b>	-40° to + 71° C		
<b>Size</b>	17.5"W x 11.5"D x 7.1"H		
<b>Weight</b>	18 lbs, including HTP-101A probes		
<b>Power</b>	3 Alkaline D Cells Approved for R1L-E2A		
<b>Battery Life</b>	Approximately 80 Hours of Use		

\*Accuracy based on recommended calibration cycle.

## Included Accessories



**HTP-101A Probes**



**SKP-8 Probes**

The R1L-E2A is available with two different styles of probes, dependent upon the application.

The HTP-101A probes are wired with 8 ft of #12 AWG cable and contain two stainless steel spring loaded pins that rotate as they are depressed to punch through corrosion and coatings. The pins are 0.158 in diameter and the pin center to pin center is 0.5 in (1.27 cm). NSN: 6625-01-527-5543 is configured to come with the HTP-101A probes.

The R1L-E2A/SKP-8 comes with a smaller probe for working in more confined spaces. The SKP-8 probes come with an 8 ft cable and terminate in color-coded spade lugs. The spacing between the pins is 0.19 in and the probe handle length is 5.5 in.

Both probes are part of the Intrinsically Safe system. The probes are molded with a conductive additive to prevent the building of dangerous static electricity.