

Product Description

The model R1L-E2A Bond Meter (Microohmmeter) is an Intrinsically Safe instrument, which may be used in Non-Hazardous or Hazardous (Listed) Locations.

Hazardous Area Approvals and Locations



Class I, Division 1, Group D, T4
Class I, Zone 0, Group IIA
Ex ia IIA T4 Ga
 $-20\text{ }^{\circ}\text{C} \leq T_a \leq +50\text{ }^{\circ}\text{C}$



Ex ia IIA T4 Ga
DEMKO 11 ATEX 104875X
IECEx UL 11.0006X
 $-20\text{ }^{\circ}\text{C} \leq T_a \leq +50\text{ }^{\circ}\text{C}$

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NOTE: THIS IS A SCHEDULE DRAWING. CHANGES MAY ONLY BE MADE WITH APPROVAL OF THE NOTIFIED BODY.

R1L-E2A Probe Connections

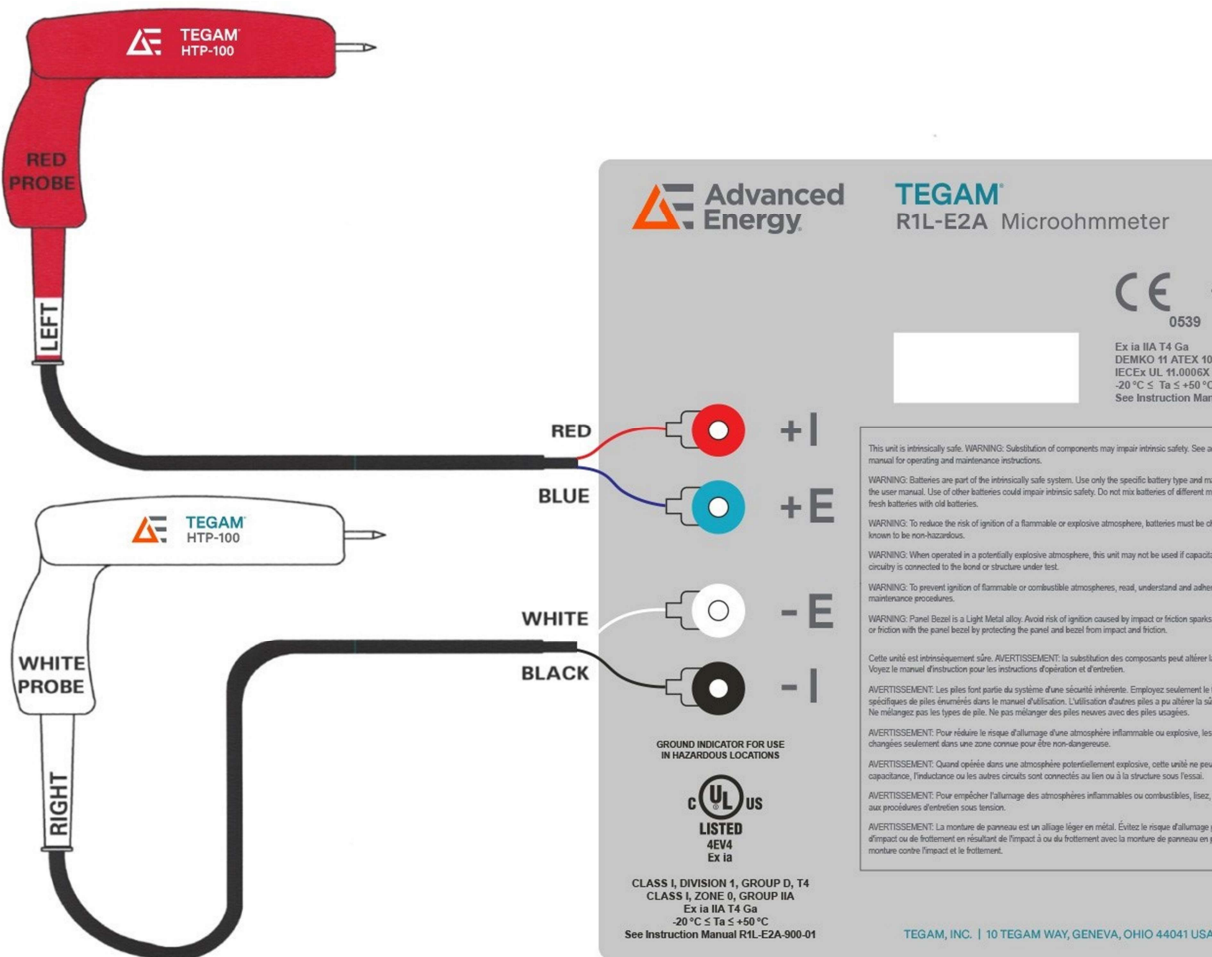
- ⚠ Only those connections specified within this drawing are permitted. Other connections may invalidate intrinsic safety.

The following connection figure and description is found in the Instruction Manual, R1L-E2A-900-01.

HTP-101A Probe Connections to the R1L-E2A

Note: Probes may be in a combination of red and white, or the same color.

Note: Representative Front Panel



UL/cUL, ATEX/IECEx Control Drawing 13742

TEGAM, Inc.

10 Tegam Way • Geneva OH 44041

440-466-6100 • FAX 440-466-6110

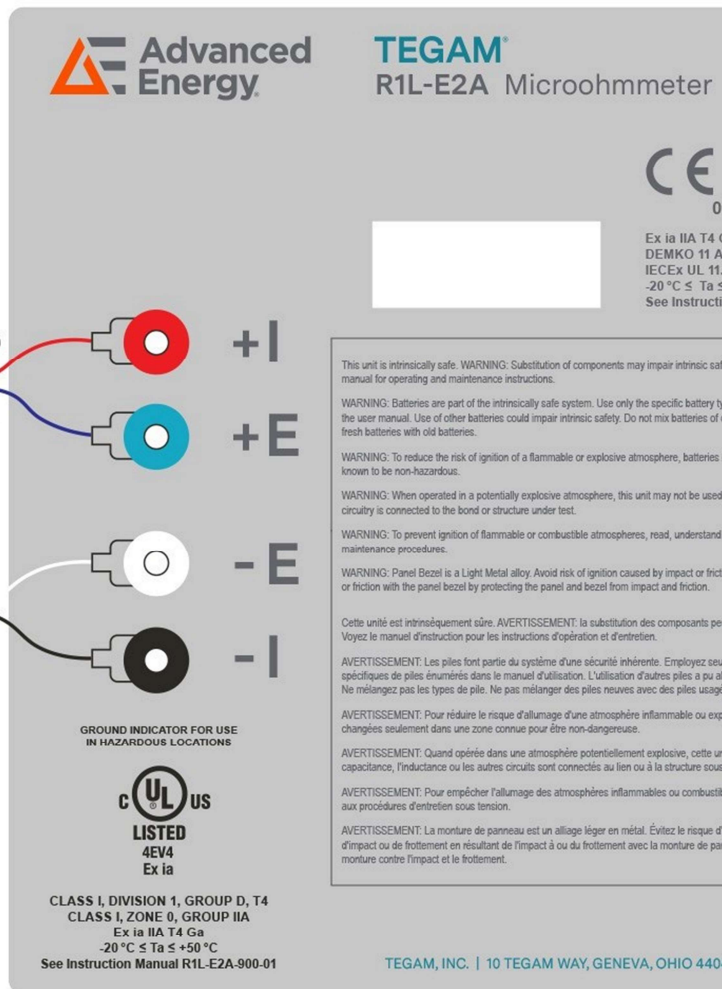
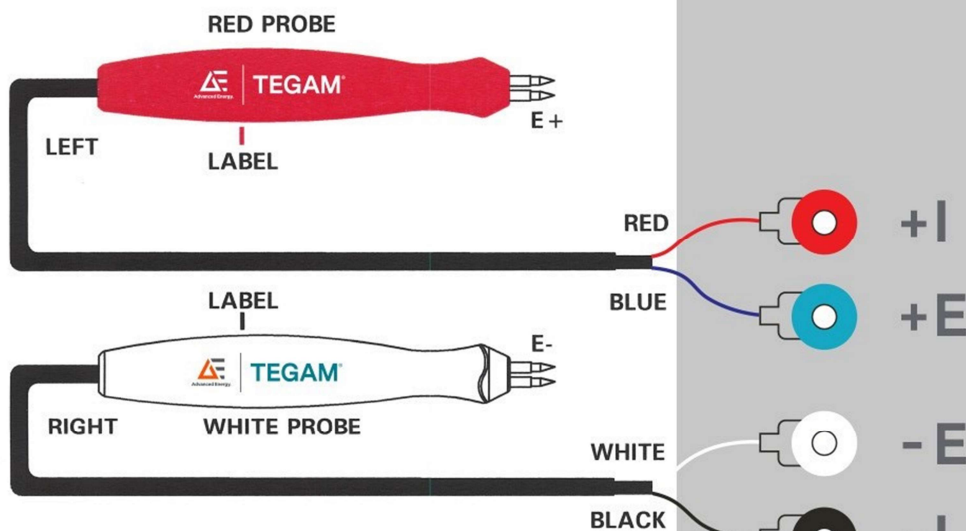
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The following connection figure and description is found in the Instruction Manual, R1L-E2A-900-01.

SKP-8 Probe Connections to the R1L-E2A

Note: Probes may be in a combination of red and white, or the same color.

Note: Representative Front Panel



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Controlled Section Text Listing for the Instruction Manual

See the Instruction Manual, TEGAM part number R1L-E2A-900-01, for the following controlled text content.

Markings



Class I, Division 1, Group D, T4

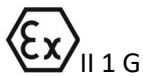
Class I, Zone 0, Group IIA

Ex ia IIA T4 Ga

-20 °C ≤ Ta ≤ +50 °C

See the Instruction Manual R1L-E2A-900-01

Ground Indicator For Use in Hazardous Locations



Ex ia IIA T4 Ga

DEMKO 11 ATEX 104875X

IECEX UL 11.0006X

-20 °C ≤ Ta ≤ +50 °C

See the Instruction Manual R1L-E2A-900-01

2.2 Operational Warnings and Considerations Prior to Use

2.2.1 Batteries

Use only Alkaline or Zinc Manganese D Cells listed below. Use of any other battery will invalidate the Type Certificate and create a hazardous condition. The only batteries that TEGAM, Inc. has secured Agency approval for use in the R1L-E2A are listed on the Type Certificate. It is:

- Energizer E95

WARNING

DO NOT INSTALL, CHANGE, OR REMOVE THE R1L-E2A BATTERY CELLS IN AN EXPLOSIVE ATMOSPHERE! A SPARK MIGHT BE GENERATED, WHICH COULD RESULT IN AN EXPLOSION.

WARNING

BATTERIES ARE PART OF THE INTRINSICALLY SAFE SYSTEM. USE ONLY RECOMMENDED BATTERIES. DO NOT MIX BATTERIES. USE OF ANY OTHER BATTERY OR MIXED BATTERIES MAY RESULT IN A HAZARDOUS CONDITION.

2.2.2 Test Probes

Only HTP-101A or SKP-8 test probes or leads may be used in an explosive atmosphere.

WARNING

USE ONLY HTP-101A OR SKP-8 TEST PROBES AND CABLE SETS WITH R1L-E2A IN POTENTIALLY HAZARDOUS ENVIRONMENTS. USE OF ANY OTHER COMBINATION OF PROBE AND CABLE INVALIDATES THE TYPE CERTIFICATION AND MAY RESULT IN A HAZARDOUS CONDITION.

Product Model and Manufacturer Information

The product model number (R1L-E2A), company name and address (TEGAM Inc., 10 Tegam Way, Geneva, Ohio 44041) are described in the Instruction Manual, R1L-E2A-900-01.

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Notes

1. Observe the following product safety warnings:

This unit is intrinsically safe. WARNING: Substitution of components may impair intrinsic safety. See the accompanying instruction manual for operating and maintenance instructions.

WARNING: Batteries are part of the intrinsically safe system. Use only the specific battery type and manufacturers listed in the user manual. Use of other batteries could impair intrinsic safety. Do not mix batteries of different manufactures. Do not mix fresh batteries with old batteries.

WARNING: To reduce the risk of ignition of a flammable or explosive atmosphere, batteries must be changed only in a location known to be non-hazardous.

WARNING: When operated in a potentially explosive atmosphere, this unit may not be used if capacitance, inductance or other circuitry is connected to the bond or structure under test.

WARNING: To prevent ignition of flammable or combustible atmospheres, read, understand and adhere to manufacturer's live maintenance procedures.

WARNING: Panel Bezel is a Light Metal alloy. Avoid risk of ignition caused by impact or friction sparks resulting from impact to or friction with the panel bezel by protecting the panel and bezel from impact and friction.

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Cette unité est intrinsèquement sûre. AVERTISSEMENT: la substitution des composants peut altérer la sûreté intrinsèque. Voyez le manuel d'instruction pour des instructions d'opération et d'entretien.

AVERTISSEMENT: Les piles font partie du système d'une sécurité inhérente. Employez seulement le type et les fabricants spécifiques de piles énumérés dans le manuel d'utilisation. L'utilisation d'autres piles a pu altérer la sûreté intrinsèque. Ne mélangez pas les types de pile. Ne pas mélanger des piles neuves avec des piles usages.

AVERTISSEMENT: Pour réduire le risque d'allumage d'une atmosphère inflammable ou explosive, les piles doivent être changées seulement dans une zone connue pour être non-dangereuse.

AVERTISSEMENT: Quand opérée dans une atmosphère potentiellement explosive, cette unité ne peut pas être utilisée si la capacitance, l'inductance ou les autres circuits sont connectés au lien ou à la structure sous l'essai.

AVERTISSEMENT: Pour empêcher l'allumage des atmosphères inflammables ou combustibles, lisez, comprenez et adhérez aux procédures d'entretien sous tension.

AVERTISSEMENT: La monture de panneau est un alliage léger en métal. Évitez le risque d'allumage provoqué par des étincelles d'impact ou de frottement en résultant de l'impact à ou du frottement avec la monture de panneau en protégeant le panneau et la monture contre l'impact et le frottement.

2. The R1L-E2A Bond Meter and its probes, which are simple apparatus devices, should only be connected to non-energized surfaces. Failure to comply with this rule violates approval.
3. Protection of the operating personnel and the overall system is not ensured if the product is not being used according to its intended purposes.
4. There are no serviceable components in the R1L-E2A.

Revision Record			
Revision	Date	ECO#	Summary of Changes
EA	06/25/2025	8212183	1) Changed format. 2) Updated probe connection figures. 3) Fixed French warning statement.
EB	12/6/2025	8216518	1) Removed notes 2 and 3 – redundancy. 2) Deleting reference to “associated apparatus.”