ANSI / ISA S82.02.01 Standard:

Title	Electric and Electronic Test, Measuring, Controlling, and Related Equipment: General Requirements
Abstract	Specifies the safety requirements that are generally applicable to all equipment within its scope. For certain types of equipment, these requirements will be supplemented or modified by the special requirements of a particular standard that must be read in conjunction with Part 1 requirements. This International Standard specifies general safety requirements for electrical equipment intended for professional, industrial process, and educational use, including equipment and computing devices for: measurement and test, control, laboratory use, and accessories intended for use with the above (e.g., sample handling equipment).

PO Box 50 ◆ Warner, NH 03278
879 Maple Street ◆ Contoocook, NH 03229
Phone 603.456.2011 ◆ Fax 603.456.2012
www.madgetech.com ◆ support@madgetech.com

MADGETECH, INC. REVISION CONTROLLED DOCUMENT

MADGE TECH
WE BUILD DATA LOGGERS

PRTemp1000IS Intrinsic Safety User Notice

Intrinsic Safety Approval:

The PRTemp1000IS has been certified by FM Approvals as Intrinsically Safe (IS) for use in Class I, Division 1, groups A, B, C, D, and Nonincendive (NI) for use in Class I, Division 2, groups A, B, C, D indoor hazardous (classified) Locations. The rating is listed as follows in the Factory Mutual approval guide:

PRTemp1000is. Pressure and Temperature Recorder.
IS / I / 1 / ABCD T4A Ta=80°C; NI / I / 2 / ABCD / T4A Ta=80°C
Special Condition of Use:
1. Use only with Tadiran Battery P/N TL-2150

These are the only safety ratings relevant to the use of this product. Use of this product in hazardous environments not specifically covered by this rating is prohibited, unless the user takes the appropriate steps to ensure the safety of the product and assumes full responsibility for its safe use. Refer to the reference sections at the end of this document for further information on approval standards and environments.

Conditions of Use:

The following conditions must be satisfied to maintain the IS rating of the PRTemp1000IS:

- When used in hazardous locations, the PRTemp1000IS must be **installed prior to the location becoming hazardous**, and **removed only after the area is no longer hazardous**.
- The maximum allowed ambient temperature for the PRTemp1000IS (under any circumstances) is **80°C**. The minimum rated operating temperature is -40°C.
- The PRTemp1000IS is approved for use only with the **Tadiran TL-2150** battery. **Replacement with any other battery will void the safety rating.**
- Batteries are user replaceable, but they may only be removed or replaced in locations that are known to be **non-hazardous**.
- Tampering or replacement of nonfactory components may adversely affect the safe use of the product, and is prohibited. Except for replacement of the battery, **the user may not service the PRTemp1000IS**. MadgeTech, Inc. or an authorized representative must perform all other service to the product.

- The PRTemp1000IS enclosure does not carry a NEMA rating. For this reason, the product is **only suitable for use in indoor locations**.
- For enclosure requirements, please consult Standard ANSI/ISA S82.02.01 (reference on page 4) or other applicable ordinary location standards.

Required Labeling:

The following label must be affixed to the PRTemp1000IS. It contains critical information for the safe use of the product.

PrTemp1000IS Intrinsically Safe Pressure & Temperature Recorder

FM APPROVED

Certified Intrinsically Safe for Class I, Division 1, Groups ABCD and Non-incendive for Class I, Division 2, Groups ABCD hazardous indoor locations, temperature class T4A. Maximum ambient temperature must be less than 80°C. This device should be installed prior to the location becoming hazardous and removed only after the area is no longer hazardous.

MadgeTech, Inc. 879 Maple Street, Contoocook, NH 03229

Reference Standards:

The PRTemp1000IS has been found to comply with the following standards:

Standard	Date	Title
FM Class 3600	1998	Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements
FM Class 3610	1999	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1 and Class I, Zone 0 and 1 Hazardous (Classified) Locations
FM Class 3611	2004	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
FM Class 3810 Including Supplement #1	1995 2005	Electrical and Electronic Test, Measuring and Process Control Equipment

Protection and Environment Reference:

The environmental rating is per ANSI/NFPA 70 National Electric Code® (NEC®) Article 500. The following information is excerpted from FM Approvals reference documents.

Protection Concepts

Type of Protection	Code	Permitted Use	Standard
Intrinsic Safety	(IS)	Class I, Division 1	FM Class 3610
Non-Incendive	(NI)	Class I, Division 2	FM Class 3611

Apparatus Grouping Per NEC® 500:

Class	Group	Typical Gas
I	A	Acetylene
	B	Hydrogen
	C	Ethylene
	D	Propane

Area Classification Per NEC® 500:

Division	Description
1	Flammable Material Present Continuously
	Flammable Material Present Intermittently
2	Flammable Material Present Abnormally

Temperature Class Per NEC® 500:

Temperature Class	Maximum Surface Temperature (of any component under fault conditions)
T4A	120 °C (with maximum 80 °C ambient)

Note that the T4A rating indicates the maximum surface temperature that may be encountered in a fault condition. **This is not the allowed operating temperature**. This temperature rating limits the maximum ambient temperature of 80 °C.