

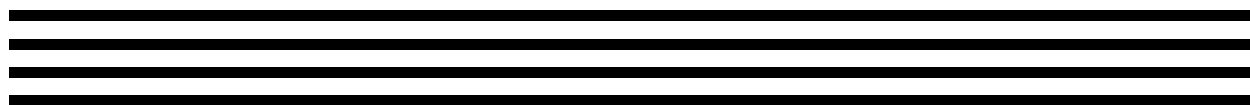
ISA-RP12.13, Part II-1987

Approved July 31, 1987

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Recommended Practice

Installation, Operation, and Maintenance of Combustible Gas Detection Instruments



The International Society for Measurement and Control

ISA-RP12.13, Part II — Installation, Operation, and Maintenance of Combustible Gas Detection Instruments

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1 Purpose

1.1 ISA-RP12.13, Part II establishes user criteria for the installation, operation, and maintenance of combustible gas detection instruments.

NOTE 1: While the industry-accepted term for the type of instruments described by this recommended practice is "combustible gas detectors," the term "flammable vapor/gas detectors" is more accurate. The National Fire Protection Association uses the word "flammable" to describe liquids having a flash point below 100°F (37.8°C), and "combustible" to describe liquids at or above 100°F (37.8°C). Reference NFPA 30 for complete definitions.

NOTE 2: In this recommended practice the term "LEL" (lower explosive limit) is utilized to make this document compatible with [ANSI/ISA-S12.13, Part I](#), "Performance Requirements, Combustible Gas Detectors," and is intended to be synonymous with "LFL" (lower flammable limit).

1.2 Its companion standard, ANSI/ISA-S12.13, Part I, was prepared to provide minimum requirements for the performance of combustible gas detection instruments and therefore to enhance the safety of operations employing such instruments.

2 Scope

2.1 This recommended practice applies to all combustible gas detection instruments that satisfy the performance requirements of ANSI/ISA-S12.13, Part I.

2.2 Reference Section 3 of ANSI/ISA-S12.13, Part I for definitions of terms used in this document.

2.3 References useful in the installation, operation, and maintenance of combustible gas detection instruments are listed in Appendix 3 for reference only. These references are not considered to be part of this document except for those specific sections of documents referenced elsewhere in this recommended practice.

3 General requirements

3.1 To assure that the instrument is compatible with its operating environment,

- a) the user should provide the potential supplier with detailed information on the conditions which exist in the area(s) in which the instrument is to be used; and
- b) the instrument must meet the requirements of the applicable regulating agency having jurisdiction; and

- c) the instrument must be compatible with the environmental conditions (e.g., relative humidity, temperature, atmospheric contaminants, etc.) in which the instrument is to operate. A typical "Environmental and Application Checklist" is included as [Appendix 1](#).

4 Unpacking

- 4.1 Unpack the shipping carton(s) and determine whether the order is complete "as received" (check for main assembly, accessories, spare parts, and Instruction Manual).
- 4.2 In the event of shipment damage, or for purposes of future correspondence, record the following:
 - a) User purchase order number and manufacturer's order number, and their respective dates
 - b) Carrier waybill number and date received (in case of transit claim)
 - c) Instrument serial number and user identification (ID) number (if assigned)

5 Storage

- 5.1 When storing combustible gas detection instruments, leave them in their original containers or provide suitable protective covers. Select a dry location that is free of fumes or vapors. Never store an instrument in an area where desensitizing agents (such as silicones) may be present.
- 5.2 Store combustible gas detection instruments where environmental conditions (temperature, humidity, etc.) are within the manufacturer's storage specifications.
- 5.3 Before storage, inspect the instruments and remove any internal batteries which could cause corrosion. If the instruments have rechargeable or "permanent" batteries, consult the manufacturer's instructions for battery maintenance during this period.

6 User record keeping

- 6.1 It is recommended that the user (1) assign an equipment identification (control) number to each instrument and (2) maintain complete records — including periodic performance, calibration, and maintenance checks (see [Appendix 2](#)).