

INTRINSICALLY SAFE SPECIFICATIONS

Understanding intrinsically safe and hazardous location specifications



Ensure Safety in Explosive Environments

“Intrinsically Safe” (IS) is a protection certification used to identify electronic equipment that is safe to use in explosive atmospheres. The concept was developed for safe operation of process control instrumentation in hazardous areas, particularly around petro-chemicals.

A device that is deemed “intrinsically safe” has been designed and certified to eliminate (or encapsulate) any components that produce sparks or heat that could ignite flammable gasses, dusts or fuels present in an environment. The presence of an IS rating on a device; however, does not mean that the device is safe for use in all areas where flammable materials are present. It is critical that you understand your environment and the IS ratings so that you accurately pair the appropriate IS rated tool to your flammable environment.

Intrinsically safe equipment must be labeled as such; with the exact IS rating for the equipment, the name of the Nationally Recognized Testing Laboratory that tested it and a certification string detailing the types of threats for which the device is safe.

Who Needs I-Safe?

Typical industries requiring I-Safe products include:

- ✓ Oil & Gas,
- ✓ Pharmaceuticals
- ✓ Chemical
- ✓ Mining
- ✓ Textiles
- ✓ Pulp & Paper

Features of an Intrinsically Safe Mobile Device



RUGGED ENCLOSURE

Ultra rugged housing for use in extreme environments and survives 6 foot drops to concrete

ADVANCED ENGINEERING

Rigorous design techniques to prevent sparks and overheating

SAFE BATTERY

Battery can be replaced in hazardous areas



THOROUGHLY TESTED

A complete design review and certification by an independent lab

PROPERLY SEALED

Painstaking manufacturing processes to ensure proper mounting and connection of cables, including gluing and sealing of connectors IP67 water and dust seal.

US and Canada Hazardous Locations/I-Safe Specifications

Class I	Class II	Class III
Groups A, B, C, D	Groups E, F, G	
Div(ision) 1 – Where concentrations of flammable vapors (flammable gases), etc. are present continuously or for long periods under normal operating conditions.	Div(ision) 1 – Where concentrations of combustible dust are present continuously or for long periods under normal operating conditions.	Div(ision) 1 – Where concentrations of ignitable fibers are present continuously or for long periods under normal operating conditions.
Div(ision) 2 – Where ignitable concentrations of flammable vapors, etc. are not likely to exist under normal operating conditions.	Div(ision) 2 – Where ignitable concentrations of combustible dust are not likely to exist under normal operating conditions.	Div(ision) 2 – Where ignitable concentrations of ignitable fibers are not likely to exist under normal operating conditions.

COMMON MATERIALS WITHIN ASSOCIATED CLASS & GROUP RATINGS, SUCH AS “CLASS I, DIVISION 1, GROUP A” INCLUDE:

- ✓ Class I Areas: Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane & Propane
- ✓ Class II Areas: Group E: Metal Dust / Group F: Carbon & Charcoal / Group G: Flour, Starch, Wood & Plastic
- ✓ Class III Areas: NO GROUP: Cotton & Sawdust



Managing Mobility From the *Edge* of Your Enterprise

Barcoding Incorporated

Barcoding Inc. helps companies extend mobile applications through to the edge of their enterprise. Through understanding an organization's business issues surrounding today's mobile worker, our solutions team assists in architecting a blueprint plan to provide the solution. This solution often includes application design, software and hardware integration, project management, services and support.

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