

In regard to electronic safety standards, there are two characteristics that are often referred to in manufacturing: Intrinsically safe and explosion-proof. Sometimes the term “explosion proof” is also used to describe the environment of operations and both means of protection, environment or equipment, are acceptable for safe manufacturing processes.

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Do I Need an Intrinsically Safe or Explosion-Proof Solution?

The circumstances of your work environment play a role in whether you need intrinsically safe or explosion-proof equipment. To determine which category is necessary for your application, consider the following parameters.

- **Cost:** Intrinsically safe equipment is generally less expensive than explosion-proof systems.
- **Maintenance:** Intrinsically safe equipment can sometimes receive maintenance without shutting off electricity. Explosion-proof systems require electricity to be shut off and occasionally requires all materials to be removed from the area.
- **Zones:** Intrinsically safe equipment is acceptable in Zone 0, Zone 1 and Zone 2 environments, while explosion-proof systems are only suitable in Zone 1 and Zone 2.

Rice Lake Weighing Systems offers an array of intrinsically safe equipment that has been approved by nationally recognized testing labs including FM Global, IECEx, ATEX and UL.

Our 882IS intrinsically safe digital weight indicator is engineered to safely provide accurate weight readings in potentially dangerous settings. The MSI-4260IS intrinsically safe crane scale brings enhanced safety to medium- and heavy-capacity overhead weighing applications. Intrinsically safe load cells are also available to support security for a wide variety of scales.

Rice Lake can also manufacture customized explosion-proof equipment to fit your unique requirements. Contact one of our expert representatives to learn how we can work with you to create a fully customized explosion-proof solution.

Intrinsically Safe

Intrinsically safety equipment combats hazards because it is incapable of causing sparks or combustion. This means that intrinsically safe equipment must limit electrical current, voltage and heat. This reduces the risk of explosion in hazardous and combustible environments such as distilleries, chemical plants, fuel refineries or textile manufacturers. Intrinsically safe equipment may be more critical in areas impacted by system breakdown, vapours and gases, combustible dust or a combination of all three.



Explosion-Proof

Utilizing explosion-proof or flame-proof equipment is a method of protection by containment, wherein the equipment is constructed with housing that contains explosions and fires. This means that even if the electrical equipment being used is not rated for the Class and Division or Zone, it can still be used in a hazardous area if it is placed in an approved enclosure. Explosion-proof equipment and housing may be made out of aluminum, cast iron or occasionally, plastic.

