ITT
Control Technologies

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Pressure Switches for use in Intrinsically Safe Circuits

Intrinsically safe circuits are defined as electrical circuits designed such that any spark or thermal effect resulting from either normal or faulty operating conditions is incapable of igniting a flammable atmosphere. Simple electro-mechanical apparatus such as the switching mechanisms used in ITT Neo-Dyn® switch products cannot generate or store significant levels of energy. As such, these simple devices, when used within a properly designed intrinsically safe circuit, need not be approved as intrinsically safe. ITT Neo-Dyn® mechanical Pressure and Temperature Switches can be considered as simple apparatus.

The bifurcated (redundant) contact design with gold contact materials, offered as an "M" option on ITT Neo-Dyn® products, provides for reliable switching of the low energy electrical loads normally associated with an intrinsically safe circuit. This option is available housed in either a NEMA 4X (IP66) enclosure or a hermetically sealed enclosure for use in severe environments.

Considering the above statements, ITT Neo-Dyn® certifies that our mechanical Pressure and Temperature Switches are acceptable for use within any properly designed, installed and approved intrinsically safe circuit. "M" option electrical contacts are recommended when reliable low current switching is required.