Pressure Switches

Monitoring the Status of Rupture Discs

Not all rupture discs are fitted with integral conductors (alarm strips). This means that they are unable to provide indication when a disc ruptures. In critical applications that require protection of pressure vessels from overpressurization and potentially damaging vacuum conditions, a monitoring and control system must quickly identify a blown disc and provide a visual and audio warning to plant operators. A primary or redundant sensor is required to detect the pressure spike resulting from a blown rupture disc.

A global chemical company uses an SOR® electromechanical pressure switch called the Mini-Hermet to monitor rupture disc integrity on equipment throughout their plant in Baton Rouge, Louisiana. Other pressure switches for this type of application include the Sub Mini-Hermet for a highly compact switch and the more general Weatherproof Pressure Switch used in non-explosive conditions.

A pressure switch is placed between a rupture disc and a pressure relief valve. When a disc ruptures, the pressure switch sends a signal to the plant’s monitoring and control system which warns plant operators.

The SOR pressure switch is a calibrated device that can actuate/de-actuate one or more electrical switching element(s) at a predetermined discrete pressure/vacuum set point upon rising or falling pressure/vacuum. SOR pressure switches can be enclosed in numerous weatherproof and explosion proof housings. Wetted parts on the process connection are available in exotic materials suitable for use with toxic or corrosive process media.

SOR electromechanical pressure switches are ideally suited for monitoring the status of rupture discs, also known as bursting discs or burst diaphragms. All switches have a 3-Year warranty.