*Smart*DS – Dynamic Explosion Detector System

Explosion Protection System Components

Advantages:

- Dynamic rate of rise pressure sensing differentiates between real explosion events and process pressure fluctuations.
- Three separate algorithms that interrogate pressure data to secure detection whilst providing excellent false alarm immunity.
- High reliability – dual pressure sensors provide secure detection and redundancy together with third party certification to SIL2.
- Event history memory records pressure data before, during, and after explosion protection system activation facilitating post-event interrogation and analysis.
- Powerful User Software Interface for graphical representation and analysis of recorded pressure data.
- Hygienic design with O-ring seal and stainless steel detector body resists harsh process environments.
- Field programmable to accommodate process changes.
- Programmable static pressure pre-alarm alerts operator of process problems.
- ATEX Approved and CE Marked.

Application

The IEP Technologies *Smart*DS dynamic explosion detection system is designed for demanding explosion protection applications requiring state-of-the-art rate of rise pressure sensing and data interrogation. The ability of the *Smart*DS to analyze rate of pressure rise, and to differentiate this from non-explosion pressure excursions, sets it apart from other explosion pressure sensors. The *Smart*DS is fully programmable to accommodate a wide range of hazard and process conditions, including vacuum and positive pressure applications. Additionally, the detector design is suitable for hygienic applications. Typical applications include protection of dust collectors, drying systems, pneumatic conveying systems, and reaction vessels.

IEP TECHNOLOGIES
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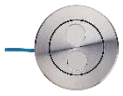
Description

The IEP Technologies *Smart*DS comprises a MEX-3 dynamic explosion pressure detector and a FAB-4 Field Connection Box. The MEX-3 is designed to be flush mounted to protected process vessels using the MEX-3 stainless steel mounting flange. The FAB-4 Field Connection Box processes the data collected by the MEX-3 detector and generates the appropriate alarm or trouble/fault signal. *Smart*DS Evaluation Software can be used to download detector settings, event logs, and both short term and long term pressure data to a personal computer in order to facilitate event investigation and analysis– a key feature.

Specifications

Explosion Multi-sensors MEX-3.2 (Pressure)			Area & Equipment Classification
Pressure Range	0 - 2 (0 - 4) bar (abs)		II 1/2D ia Da T65°C IP68
Process Temperature	-20 to +125°C		II 1G Ex ia Ga IIC T1…6
Ambient Temperature	-20 to +85°C		Cl. I. Div. 1 & Cl. II. Div. 1
Measuring Cells - Ceramic			DMT 99 ATEX E 024
Explosion Multi-sensors MEX-3.2T (Pressure and Temperature)			
Pressure Range	0 - 2 (0 - 4) bar (abs)		II 1/2D ia Da T65°C IP68
Temperature Range PT100	0 to +160°C		II 1G Ex ia Ga IIC T1…6
Process Temperature	-20 to +125°C		Cl. I. Div. 1 & Cl. II. Div. 1
Ambient Temperature	-20 to +85°C		DMT 99 ATEX E 024
Measuring Cells - Ceramic			
Explosion Multi-sensors MEX-3.2HT (High Temperature Applications)			
Pressure Range	0 - 2 (0 - 4) bar (abs)		II 1/2D ia Da T65°C IP68
Process Temperature	-20 to +160°C		II 1G Ex ia Ga IIC T1…6
Ambient Temperature	-20 to +125°C		Cl. I. Div. 1 & Cl. II. Div. 1
Measuring Cells - Hastelloy			KEMA 03 ATEX 1480
Welding Flange MEX-3.2 (all variants)			
Dimensions	Ø 130 x 24 mm		
Material	1.4404 / 316L		
Field Connection Box FAB-4			
Operating Voltage	10 - 30 VDC		II 2 (1) D Ex tb [ia Da] IIIC T85°C Db
Max. Current Consumption	1.5 W		II 3 (1) G Ex nA [ia Ga] IIC T4 Gc
Ambient Temperature	-25 to +75°C		Cl. I. Div. 2 & Cl. II D, DIV. 1 & 2
			SEV 15 ATEX 0120

Contact Information

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