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InertoSafe® PL d

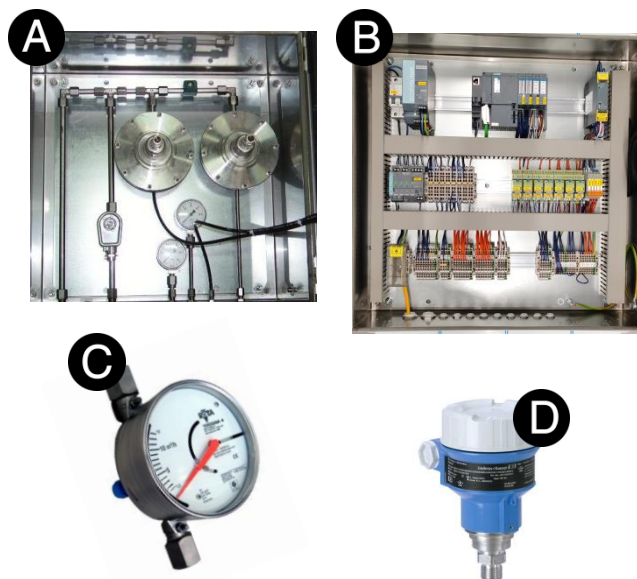
- + Designed according to PL d, EN 13849-1
- + Validation according to EN 13849-2
- + ATEX- certified components
- + Suitable for all kinds of vessel , e.g. centrifuges, container filling points, tanks
- + DCS independent inertisation system with integrated logic
- + Communication with I/O
- + Other protocols and interfaces optionally available
- + Output terminal to display the most important data and to support the regular inspections
- + Low maintenance

Key functions

The InertoSafe® PL d inertisation system provides a safe and inert environment inside all homogeneous vessels. The control system runs a self-test with every start-up to ensure the functionality of the inertisation system. After the purge process (displacement of the oxygenated atmosphere) the inertisation changes to the pressure conservation mode. To guarantee the highest possible safety, the pressure controller maintains a slight overpressure in the vessel. Leakage losses are compensated automatically. The components used are failsafe and virtually maintenance free.

Options:

- + Inertisation of several vessels using the control system
- + Purge process with a 2nd valve (higher pressure and flow) to reduce purge time



Applications requiring inert vessels to eliminate risk of explosions often demand increased safety measures for the entire system. InertoSafe® is designed according to PL d based on EN 13849-1 and validated according to EN 13849-2. InertoSafe® PL d is designed to operate with any kind of primary control system and provides a highly integrated and failsafe system. Two dual channel safety contacts are provided for external safety stop functions. The system can be operated with vessels which can be opened which are monitored by an external safety switch as well as with closed vessels.

- + integrated overpressure protection with vent valve
- + Control and evaluation by the DCS via Bus (e.g. PROFINET, Profibus, EtherNet/IP, Modbus)
- + Installation of the control cabinet in Zone 1 or 2 on request

Technical data

InertoSafe® PL d system	
Approvals	PL d verified acc. to EN ISO 13849-1 Validated acc. to EN ISO 13849-2 ATEX certificates for components UL certificates for components
Operation	Operation with integrated control system or Integration into FERRUM Control System Scraper (CSS)
Power supply	24 V DC ± 10 %
Max. power consumption	5 A
Admissible ambient temperatures	Storage -20°C to +40°C Operation 0°C to +40°C

Purge panel	
Material	Stainless steel
Dimensions (W x H x D)	500 x 500 x 300 mm
ATEX approvals	Zone 1
Weight	approx. 18 kg

Control system	
Design	Standard rack (also available in enclosure IP66)
Dimensions (W x H x D)	e.g. 600 x 600 x 210 mm
ATEX approvals	n/a Zone 1 or 2 on request
PLC	Siemens S7-15xx F Safety Controller
Interfaces	Digital I/O Other interfaces available
HMI	Siemens 4" TFT-Display
Weight	approx. 30 kg

Configuration

The InertoSafe® PL d system includes

- A** Purge panel in stainless steel for installation in a hazardous area
- B** Pre-wired Control cabinet for installation in a safe area

C Flow meter type Rota Yokogawa RAMC

D Pressure transmitter type Cerabar

Operator manual and certificates

R&I example

