



Automated Overfill Protection System

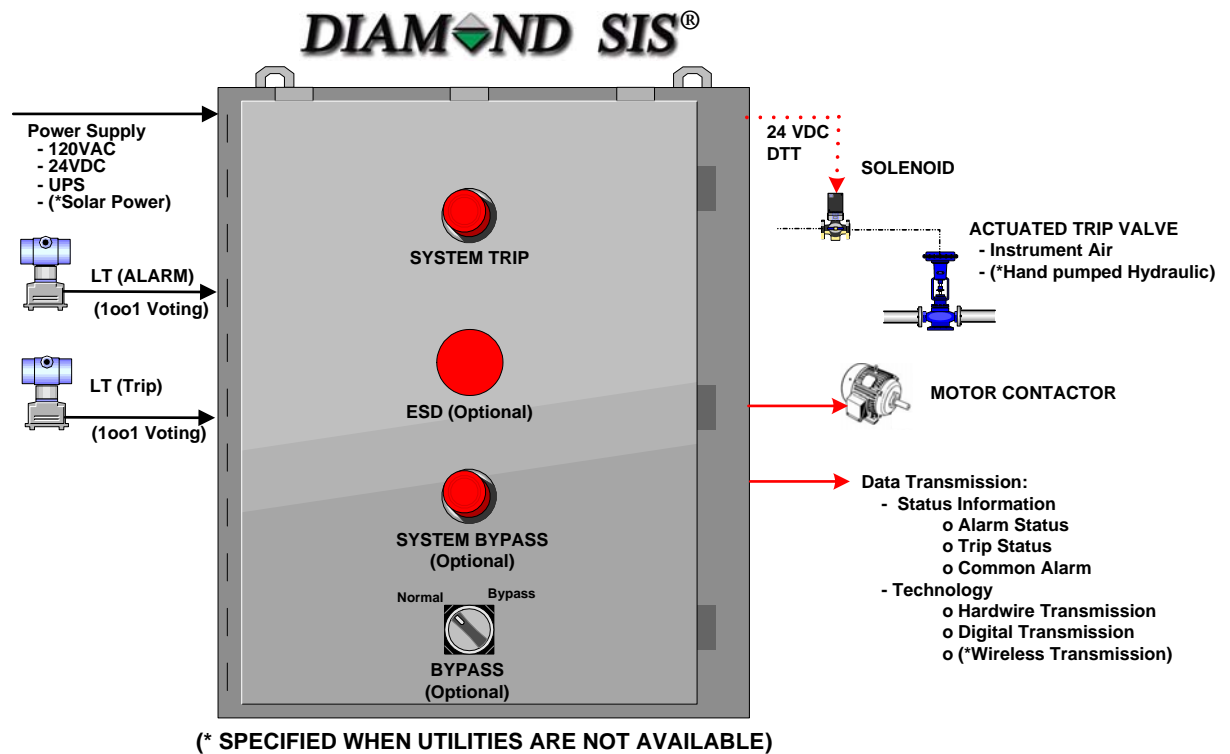


High/low level events challenge the safe and reliable operation of terminals and tank farms. Liquid overfill, or high level, can result in vessel damage and/or release of hazardous chemicals to the environment. Low level can result in loss of suction to transfer pumps with the potential for pump damage and can pose significant hazards when floating roof tanks are used.

End users have often struggled with implementing the required Instrumented Safety Functions to prevent these events. The **DIAMOND-SIS®** is a stand alone SIS logic solver designed to receive level signals from switches or transmitters. When user-defined set points (high/low) are violated the **DIAMOND-SIS®** provides independent outputs to close isolation valve(s) and/or shut down transfer pumps.



The **DIAMOND-SIS®** is a low-cost, stand-alone, independent, non-PE logic solver (*suitable for up to SIL 3*). Rated for $-30C$ to $+75C$ and constructed using Class I Div II components the **DIAMOND-SIS®** can be installed in the harshest process units near the tank. Further, the number of inputs and voting architecture, 1oo1, 1oo2, 2oo2 or 2oo3, can be adjusted for each process variable to meet any SIL or reliability requirement. The **DIAMOND-SIS®** is flexible and can be customized for your specific application. For the ultimate in remote, stand-alone installation, use of Solar Power, wireless communication, and hand pumped hydraulic actuated valves provide SIL protection without the need for utilities. Field installation of the logic solver reduces implementation costs by 50% compared to safety-PLCs.



THE LOW COST ALTERNATIVE TO SAFETY PLC

DIAMOND SIS®

KEY FEATURES

- 2003 version is certified to IEC 61508 SIL 3 in SH3 configuration
- High reliability
- Proven technology
- Rugged design
- Field mountable
- On-line testable & repairable
- Remote process variable & system status monitoring
- No programming
- Low installed cost alternative to a Safety PLC

SPECIFICATIONS

- Supply Power: User specified, 24VDC/110VAC/240VAC
- Input: 4-20 mA DC or discreet (dry contact)
- Output: 5 Amp resistive dry contact
- Accuracy: 1% of span
- Temperature: -40 to +80°C Storage / -30 to +75°C Operating
- Environment: All internal components rated Class I Div II Groups A/B/C/D
- Enclosure: NEMA 4X – choice of materials

ENGINEERING/DOCUMENTATION OPTIONS

Safety requirements specification for complete instrumented loop, including SIL Verification

ORDERING SELECTION

