

Alarm Management Solutions

- Know and improve alarm performance
- Integrate completely with DeltaV™ and non-DeltaV control systems
- Increase operator efficiency
- Comply with regulatory and industry standards



Dynamic Alarm Management Services provide a platform for managing abnormal and normal situations by eliminating alarm floods and meeting recommended metrics.

The Value of Alarm Management

Alarm Management ensures that the correct alarms are annunciated to the operator at all times. This includes all modes of process operation. Poorly configured alarms in the control system lead to millions of dollars of direct losses per year and even more in production losses. Alarm “floods” lead to unsafe conditions and increase the probability of incidents resulting in financial loss.

Alarm standards in industrial processes are defined by ISA 18.2 and IEC 62682. These standards are recognized by many regulatory organizations around the world including the Occupational Safety and Health Administration (OSHA). Non-compliance with these standards can lead to hefty fines and even loss of operational permits. Any alarm flood, defined by ISA 18.2 and IEC 62682 as more than 10 alarms occurring in a 10-minute period on a single alarm screen (one operator position), should be treated as a safety near-miss.

With effective Alarm Management and a well-maintained alarm system, you can avoid alarm floods and transform the alarm system from being a nuisance during process upsets to

a valuable tool for the operations staff. Alarm information can be presented to the operator in ways that aid the operator in correct response to alarms and reduce operator fatigue while also decreasing operator errors.

Benefits of Alarm Management

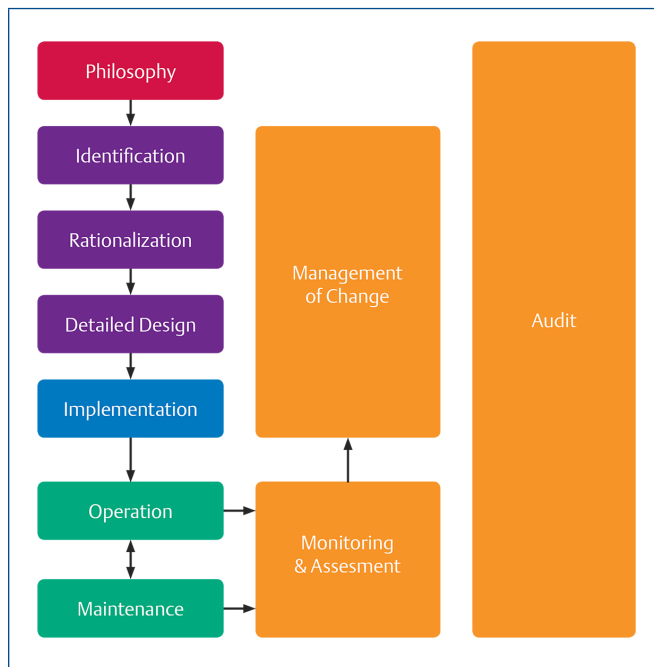
- **Know and improve your alarm performance** – Measure your current alarm performance and compare your alarm KPIs against the industry standard.
- **Integrate completely with your control system** – Alarm service remediation leverages AgileOps™ Alarm Management Software features, capabilities and solutions to address alarm floods and improve alarm performance deficiencies identified in alarm reports.
- **Increase operator efficiency** – Dynamic alarm rationalization can significantly calm the control room, allowing operators to focus on production. Operators will be able to respond to alarms quickly and effectively, instead of being inundated by alarm floods and nuisance alarms.

- **Comply with regulatory and industry standards** – Emerson’s Operator Performance experts will address shortcomings in your alarm performance and improve your alignment to regulatory and industry standards.

Alarm Management Services

Emerson’s Alarm Management Services focuses on the complete Alarm Management Lifecycle. From alarm philosophy through alarm rationalization and implementation, we can deliver an alarm system that follows ISA 18.2 and IEC 62682 requirements and recommendations.

- **Alarm Philosophy Services** – Emerson performs both corporate and site Alarm Philosophy reviews. The Alarm Management standard requires a documented process that defines the objectives of the alarm system and governs the work process and standards for alarming.



ISA 18.2 & IEC 62682 Lifecycle

- **Alarm Assessments** – Emerson analyzes alarm data and identifies areas of improvement. A report is available that provides recommendations based specifically on your site’s alarm performance. Your event chronicle data is processed to produce an alarm analysis. From that analysis, Emerson creates a report that details your current alarm performance and compares the site’s alarm KPIs against the industry standard KPIs. The report provides methodologies to remediate poor alarm performance e.g. alarm rationalization and nuisance alarm elimination.

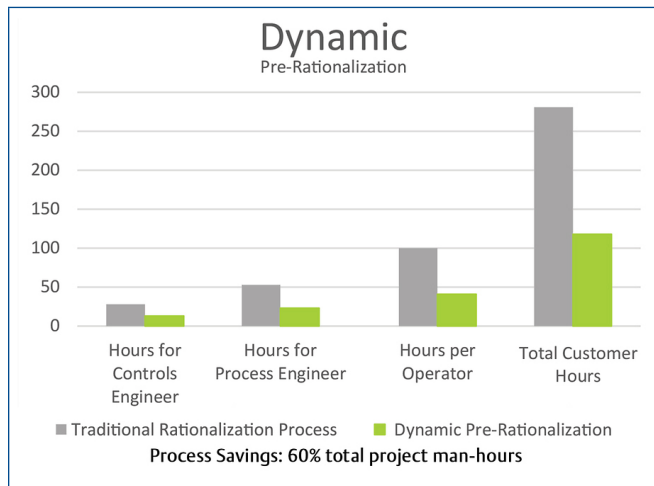
- **Alarm Rationalization** – The step for designing an alarm system. Emerson reviews every point in your control system. Alarm Rationalization consists of:
 - **Alarm Management Design Preparation and Training** – Emerson will review the Alarm Philosophy Document and the Alarm Management database which provides the basis from which the dynamic alarm systems will be built. A kickoff meeting will be held with preparatory training of your design team members so that all members are aware of the philosophy, objectives and capabilities of the Alarm Management systems to be implemented.
 - **Alarm Management System Development** – In leading the alarm design process, Emerson will provide its engineering knowledge to update the current alarm configuration. System boundaries and case logic for each system will be created. Individual alarms including causes, consequences, and suggested responses along with case-dependent and non-case-dependent alarm settings will be determined and documented. A rationalization report will be issued to client for review and comment. Upon receipt of comments, Emerson will hold a face to face review on site. Necessary revisions to the management system updates will be made after the review is completed and all design changes pass the MOC approval process.

- **Alarm Management Implementation** – Using the final alarm rationalization report from the above step, Emerson will conduct the on-site Alarm Management system configuration with the client’s personnel actively involved in verification and approval of design.
- **Operator Training** – Emerson will provide basic Operator Training covering Alarm Management fundamentals, use of the software, and overview of the configuration prepared from the rationalization design.

Alarm Rationalization

The Dynamic Pre-Rationalization Process™

We are sensitive to the limited availability of operations and process engineering personnel in many plants. We have a proven methodology to speed the rationalization process and reduce your staff time by rationalizing off-site. This optional process allows Emerson’s experienced process engineers to go through the rationalization process, rationalizing all alarms in our office. We will then deliver preliminary results and review them with plant operations and process engineers. This process reduces the time requirement for plant personnel by about 60% over standard rationalization meetings.



Dynamic Pre-Rationalization Process

Our customers are rewarded with an effective full Dynamic Pre-Rationalization™ for consistent alarm management. Start off with the proper ground work of an efficient process. Every project begins with a review or development of an Alarm Management Philosophy Document and continues with an up-front review of the database, and continues with systems, boundaries and case logic.

Using the Dynamic Pre-Rationalization process, Emerson will fully and dynamically rationalize each point for results that meet ISA 18.2 metrics while saving the customer hours and hours of rationalization time.

Ordering Information

Consult your local Emerson office or Emerson’s Control and Operator Performance Center of Excellence for availability and quotation.

Related Products

- AgileOps Alarm Management Software
- DeltaV Alarm Help
- DeltaV Alarm Mosaic

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