



ALARM STATS



Alarm Management

HTML5 based application to help reduce risk and increase safety of plant operations through well-managed alarm systems.

AXON presents a smart approach to alarm management that helps customers achieve safe and agile plant operations based on the concept of combining practical bottom-up solutions with fundamental top-down improvements.

- **Improves operator detection and response to abnormal situations.**
- **Avoids upsetting conditions that may impact production.**
- **Enables safer, more profitable plant operations.**

New Features in Release 2

- Management of several sources of data acquisition, leading to centralize the alarm philosophy through different sites. The information can be reviewed separate by site or all integrated in one view.
- Addition of "operation station" concept as direct filter grouping all the alarms handled by each operation position.
- Addition of comprehensive filtering system that allows online filtering for every information of the alarms, leading to better narrowing of the information.
- Change view from graph to actual data with one touch without need of exporting data.

ALARM STATS Version 2

ALARM STATS

Mitigate Operational Risk through Improved Operator Situation Awareness








Poorly performing alarm systems, plagued by alarm floods, inaccurate alarms, and disabled alarms, diminish situation awareness and negatively impact plant production and safety.

Key Features

- Available from the plant floor to corporate visualization.
- Easy and intuitive operation.
- Customizable KPIs to accommodate plant Alarm Management Philosophy.
- Outstanding graphics that help to get an overview analysis at a glance.
- Based on HTML5, making the access to the information easily accessible to everyone on the company. Compatible with all HTML5 web browsers.
- Availability to be installed in DMZ to be reachable from corporate networks.
- Detailed information for a further analysis of alarm behavior.
- Integrates with Aveva System Platform Alarms History (ALM2DB, History blocks).
- Available with different databases such as MySQL and Sql Server.
- Automated and On-demand reports to keep track of alarm system performance.
- Based on state-of-the-art technologies for database and rendering.

----- ALARM STATS Version 2

- New →** • Comprehensive filtering system that allows online filtering for every information of the alarms, leading to better narrowing of the information including:

-  **Priority**
-  **Alarm type**
-  **Acknowledgement status**
-  **Model area**
-  **Value**
-  **Alarm Duration**
-  **Acknowledge delay**

- New →** • Management of several sources of data acquisition, leading to centralize the alarm philosophy through different sites. The information can be reviewed separated by site or integrated in one view.

- New →** • "Operation station" concept as direct filter grouping all the alarms handled by each operation position.

- New →** • Change view from graph to actual data with one touch without need of exporting data.

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Views description

All the KPIs used for the analysis have their default value set according to EEMUA 191 recommendations but are customizable to meet the requirements of the site.

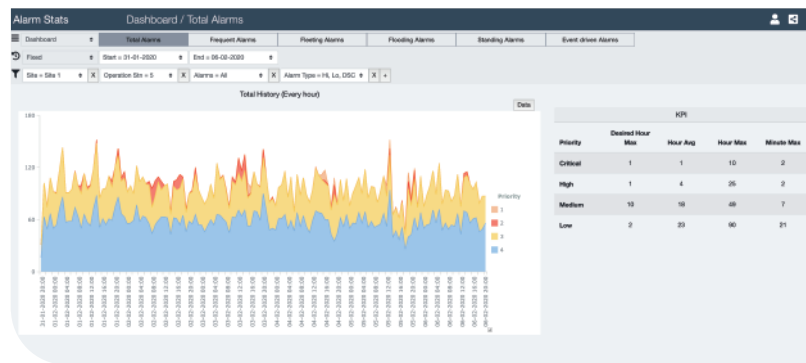
All the views can be filtered allowing to narrow the data as much as needed.

Every view has the calculated KPIs according to the filters applied.

Total Alarms View

Total Alarms View is usually used to see priority distribution and alarm rate peaks.

This view shows information of the amount of alarms and priority distribution through the time asked, both on trend and table.

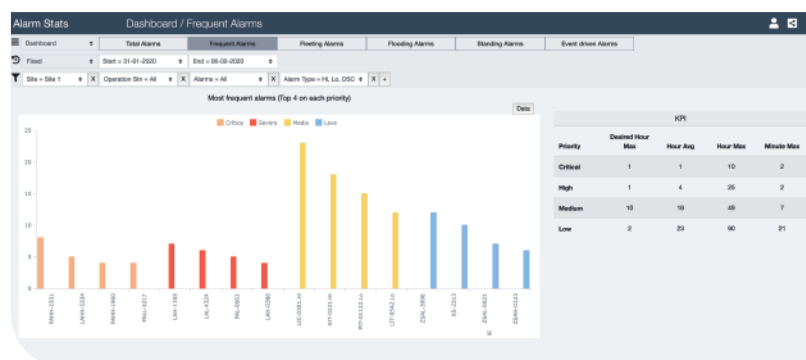


Most frequent

Frequent alarms are those that occur very often and therefore, eliminating the top 10 or 20 most frequent alarms results in a significant reduction of alarm load.

This view shows the most frequent alarms with information on amount, duration, and acknowledgment.

The top n most frequent alarms are shown on the graph (where n is configurable), and the complete list is accessible from the Data button next to the graph.



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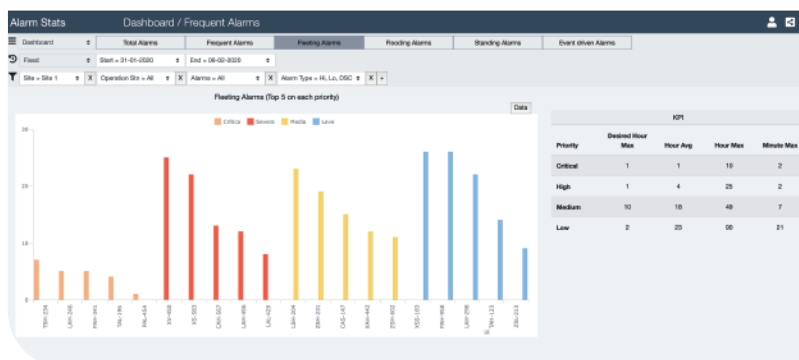
Views description

Fleeting/Chattering

Fleeting/Chattering alarms (alarms that repeat excessively in a short time interval) create a level of nuisance to the operator. According to industrial alarm standards, no chattering is acceptable. Therefore, reducing the amount of alarm chatter is a primary goal in redesigning alarm parameters.

This view shows fleeting alarms with information on amount, duration, and acknowledgment

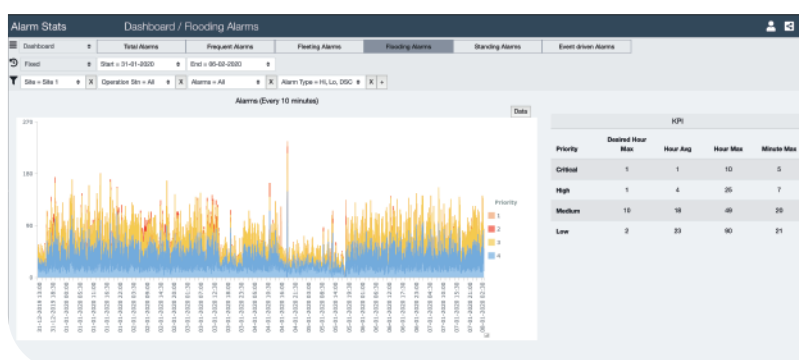
The top n most fleeting/chattering alarms are shown on the graph (where n is configurable), and the complete list is accessible from the Data button next to the graph.



Flooding

Alarm flooding is caused by a large amount of alarms in a short time, thus overwhelming the operator and taking all the attention. It has become one of the main problems in alarm management of process plants. A reduction of alarm flood periods contributes to a decrease in plant incidents.

This view shows the evolution of flooding alarm periods with information on amount of alarms. It also shows the priority distribution.



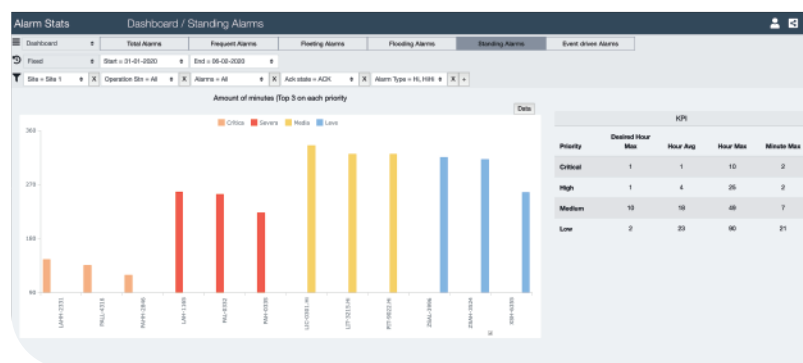
ALARM STATS

Views description

Standing

Standing Alarms are those alarms that are active for long time. Usually, this is caused by systems or equipment that are offline, out of service or faulty alarm limits.

This view shows the amount of standing alarms that are present indicating the duration as well as the priority distribution.



Configuration

Configuration is accessible depending on the user profile and includes the main aspects to customize the product.

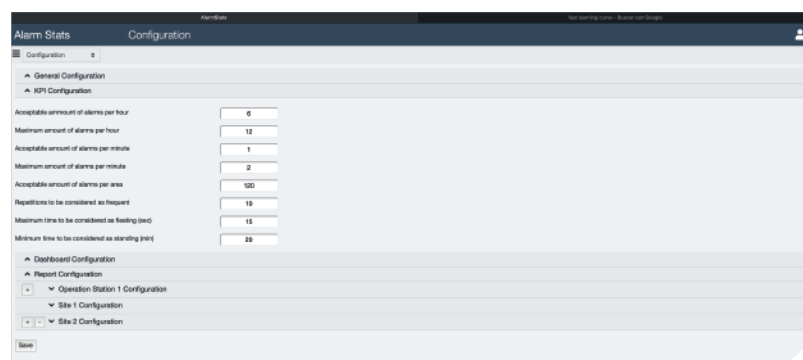
Very intuitive and easy configuration that helps to get the software running and ready to use, in minutes.

EEMUA 191 Standard values for KPIs are used as default values that can be modified and updated to customer preferences.

Configuration also includes automatic reports activation and customization, default filters for Dashboard views, etc.

Easily add different sites databases as sources for alarm analysis.

Group alarms by operation station helping to partition the alarm reviews in a "by operator" basis.



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Views description

Event driven

Given an event by tagname, this view shows a list of all the alarms that were triggered during the following customized amount of time, helping to find out related alarms.

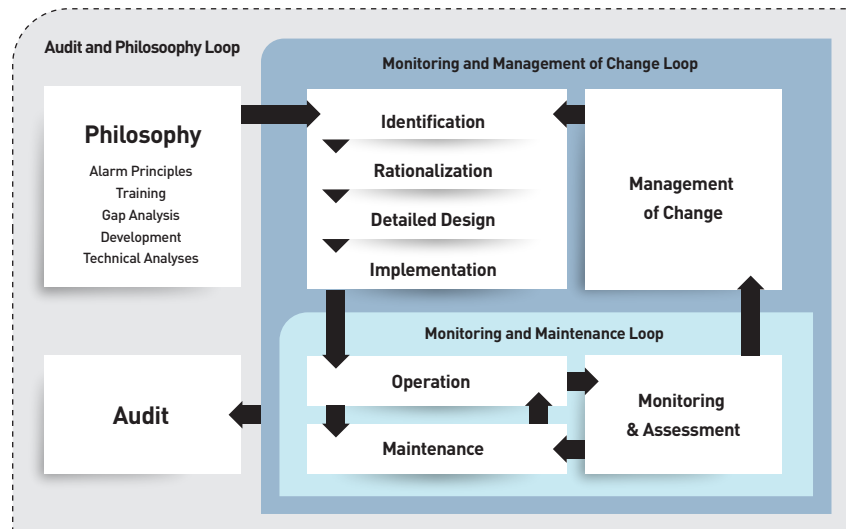
Timestamp	Tagname	Description	Site	Plant	Area	Spd Value	Alarm Type	KPI				
								Priority	Desired Hour	Hour Avg	Hour Min	Minute Max
01-01-2020 18:23	FF1702	Flow Measurement	Site 1	Expenditors	Outlet	15	LA	Critical	1	1	10	2
04-01-2020 06:52	LAI-7874	High Level	Site 1	Expenditors	Power	-	DSC	High	1	4	25	2
05-01-2020 01:30	LAI-6446	High Level	Site 1	Expenditors	Inlet	-	DSC	Medium	15	18	49	7
05-01-2020 14:06	PG-7821	Pressure controller	Site 1	Expenditors	Outlet	13	LA	Low	2	23	80	21
10-01-2020 01:23	LAI-5107	High Level	Site 1	Services	Supply	-	DSC					
12-01-2020 18:58	PG-1887	Pressure controller	Site 2	Treatment	Outlet	21	LA					
15-01-2020 05:55	PAU-7318	High Pressure	Site 1	Services	Supply	-	DSC					
16-01-2020 06:59	XD-0493	Failed Status	Site 2	Treatment	Outlet	-	DSC					
16-01-2020 17:53	PT-3204	Pressure measurement	Site 1	Treatment	Dosing	33	HA					
20-01-2020 08:04	PAU-5490	LowPressure	Site 2	Treatment	Outlet	-	DSC					
21-01-2020 09:41	PG-0487	Pressure controller	Site 1	Services	Storage	9	LA					
22-01-2020 22:35	LF-6765	Level Measurement	Site 2	Treatment	Supply	28	LA					
24-01-2020 09:29	LF-9483	Level Measurement	Site 2	Treatment	Outlet	28	LA					
24-01-2020 22:48	PAU-5534	LowPressure	Site 1	Treatment	Storage	-	DSC					

Benefits

- Compliant with standards and best practices such as ISA-18.2 and EEMUA 191.
- Helps the operator focus on the process, eliminating non-important alarms.
- Maintains the process on track reducing incidents risk.
- Assists on responding to abnormal situations with greater speed and accuracy.
- Supports extensive KPI calculations and archiving for long-term historical performance monitoring and optimization efforts.
- Reduces total cost of ownership and minimizes maintenance requirements by leveraging standard based technologies and interfaces.
- Intuitive with a user-friendly interface.
- Easy configuration leading to a fast learning curve.
- Improves operator detection and response to abnormal situations.

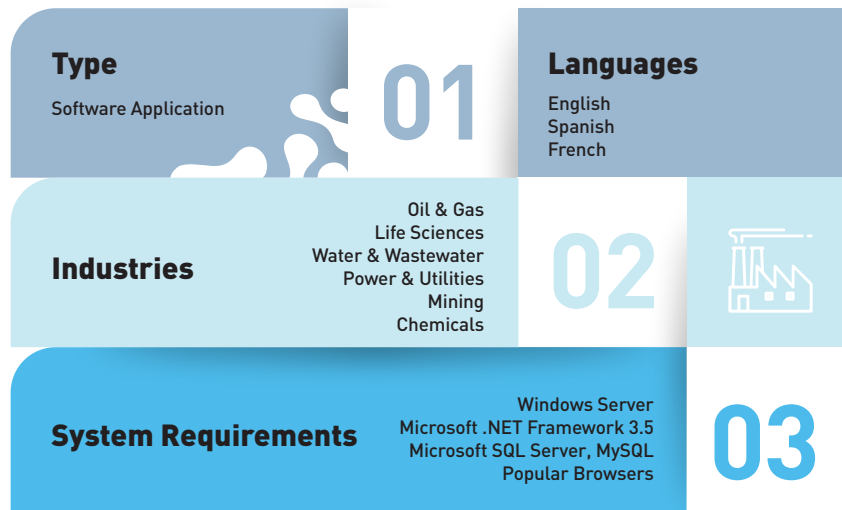
ALARM MANAGEMENT LIFECYCLE

AXON provides services and software to bring alarm management practices into compliance with the current ISA 18.2 standards.



ALARM STATS based on ISA-18.2, Alarm Management Lifecycle

SPECIFICATIONS



ALARM STATS is designed to meet the requirements of a broad range of industries, including Oil & Gas, Power Generation, Pharmaceutical and general manufacturing.

ALARM STATS is powerful, yet simple to use at all levels. Operational intelligence for control room to KPI's for the board room.