### Duty alarm principal

The duty alarm system is used for the transfer of alarms to the technical crew in case of an unattended machinery space. The duty alarm system will be configured from a particular OWS. The duty alarm system provides unambiguous audio visual annunciation of alarms and warnings via a dedicated banner located at the top of the alarm panel screen.

A watch and call system extends the central alarm system to engineers' cabins and public areas when machinery spaces/control rooms are unattended.

### Alarm types

#### Alarm detection for analogue signals

The following functions are included:

* Instrument failure alarms
* Low-low process alarms with or without action (slow-down)
* Low process alarms
* High process alarms
* High-high process alarms with or without action (slow-down)
* Return to normal detection with dead-band to avoid alarm fluctuations
* Adjustable filter factors to filter fluctuations in the incoming signals
* Time delay of alarm triggering and return to normal messages.

#### Alarm detection for on/off (two state) signals

The following functions are included:

* High process alarms
* Return to normal detection
* Time delay of alarm triggering and return to normal messages.

#### Alarm detection for on/off signals with line check

The following functions are included:

* High process alarms (open or closed)
* Line broken alarm
* Line short alarm
* Return to normal detection
* Time delay of alarm triggering and return to normal messages.

### Attended alarm mode

NavVision will transfer the alarm to the activated location.

In case of an attended or manned machinery space this location will be the:

* Engine Control Room (ECR)
* Accommodations (e.g. mess room and public areas).

### Unattended alarm mode

In case the machinery space is left “unmanned”, alarms that will come in will be redirected immediately to the selected Duty Alarm Panel.

The “Unattended” mode can be activated on the workstation in de ER or the ECR.

NavVision will direct the alarm to the activated location.

In case of an unattended or unmanned machinery space this will be:

* The engineer on-duty
* Engine Control Room (ECR)
* Accommodations (e.g. mess room and public areas).

New alarms are indicated respectively on the DAP of the engineer on duty in the ER and in public spaces such as the mess room. On the panels, the alarm sounding (horn/buzzer) can be silenced (only local), but the alarms still need to be acknowledged on the OWS within the relevant technical area.

If alarms are not acknowledged within a specific period of time, the *General Engineers Alarm* (GEA) is invoked, independent from the *Attended/Unattended* mode. Once the GEA goes off, the alarm will sound on all alarm stations

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### How to acknowledge an alarm

The alarms must be acknowledged on the OWS in the Engine (Control) Room by means of:

* Double clicking the corresponding alarm line (alarm viewer)
* Click the Silence/Acknowledge button

### How to silence an alarm (not at ECR)

You can silence an alarm on all other locations (except GEA and Fire alarms).

This will silence the local alarm buzzer for 3 minutes, but will not acknowledge the alarm.

The engineer is required to go to the Engine (Control) Room to acknowledge the alarm.

### When will an alarm disappear

An alarm will disappear only when rectified AND acknowledged. Acknowledged alarms will show in the normal instrument colour.