



## Introduction - Installation & Commissioning

### Prerequisites

To avoid delays, it is of utmost importance that our Team leader is assisted by the C/E, or a person pointed out by the C/E, in retrieving the necessary work permits/approvals in due time, throughout the entire duration of the project, concerning:

- Cable penetrations (E.g. if restrictions on where, when and/or how to open/close them, apply).
- Hot work (E.g. if restrictions on where, when and/or how to perform it, apply).

**If required, the C/E must obtain an approval from the Head Office in advance, in compliance with internal policies, concerning:**

- Smoke test (Smoke detectors/Hi-Fog system to be set in manual mode during test– Also see: *'Introduction - Smoke test'*)

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## Project activities

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### Positioning of equipment (Approx. 2 days)

- xx no. of LAS-10 Detectors, positioned in engine spaces acc. to smoke test survey results on vessel class, incl. a final follow-up test.
- 1 pc. of CU, Control Unit, for every 12 pcs. of LAS-10 Detectors, positioned in a predetermined high traffic area.
- 1 pc. of PSU, Power Supply Unit.
- 1 pc. of Monitor, positioned in ECR, Engine Control Room.
- 1 pc. of USB Interface, for each CU, positioned in ECR.

### Cabling (Approx. 7 days)

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|--|------------|
| • 1 pc. of Detector cable for each LAS-10 Detector (2x0,75 + 2x0,5 mm <sup>2</sup> ) | Ø 8,5 mm.  |
| • 1 pc. of 230V Power cable for each PSU (3G2,5mm <sup>2</sup> ).                    | Ø 9,7 mm.  |
| • 1 pc. of 48V Power cable for each CU (2x4mm <sup>2</sup> ).                        | Ø 12,5 mm. |
| • 1 pc. of Data cable from each CU (2x0,75 + 2x0,5 mm <sup>2</sup> ).                | Ø 8,5 mm.  |
| • 1 common Alarm- and fault cable from CU's (2x0,75 + 2x0,5 mm <sup>2</sup> ).       | Ø 8,5 mm.  |

### Welding (Approx. 1 day)

- 1 bracket for each LAS-10 Detector.
- 1 bracket for each CU.
- 1 bracket for PSU.

### Equipment assembly (Approx. 2 days)

- 1 pc. of Detector plug for each LAS-10 Detector.
- Connection of cables – CU, PSU, Monitor.

### Commissioning, test and training (Approx. 2 days)

- System commissioning.
- Test.
- Crew training.