

# Sample Extraction Smoke Detection System SDS-48

## Description

Sample Extraction Smoke Detection System SDS-48 according to IMO Rules, SOLAS Chapter II-2, Regulation 13-1



The smoke detection system SDS-48 is suitable for controlling up to 48 cargo holds. It uses the existing CO<sub>2</sub> fire extinguishing pipe work through which air is continually sucked from the cargo hold. In the smoke detection system itself the air which has been taken from the cargo hold is examined for smoke and blown out of the vessel by fans. The smoke detection system SDS-48 is explosion protected. For remote indication of fire alarms and faults a repeater panel must be installed in the wheelhouse. It will be connected to the smoke detection panel only by a 4-wire cable.

A typical smoke detection system consists of the following primary components:

- a smoke detection panel with or without integrated connections for detection lines
- one or more repeater panels on the bridge or in the fire control room for remote display of alarms and fault warnings
- a fan unit for drawing air from the cargo holds

in addition, if needed:

- one or more extension panels for connecting additional detection lines
- a relay box with voltage-free contacts for a fire alarm for each individual detection line

## Overview

 [SDS-48 Overview \(54.1 kB\)](#)

## Smoke Detection Panel SDS-0



Smoke Detection Panel SDS-0

Typ: SDS-0

Art.No.: SDS02.100

The smoke detection panel SDS-0 contains the control module, the power supply module, along with an galvanic isolator for safeguarding against explosion. Furthermore the panel provides all appropriate terminals for external feeds.

- Main and Emergency power supply
- Fan 1 of the fan unit
- Fan 2 of the fan unit
- RS-485-bus for repeater panel(s) and the relay box
- Combined fault warning (2 sets of voltage-free relay contact )
- Combined fire alarm (2 sets of voltage-free relay contact)
- General alarm (2 min delay, voltage-free relay contact)
- Additional voltage-free relay output for switching max. 250V under a fire alarm
- Output for additional sounders 24V (additional sounder optional)

## Smoke Detection Panel SDS-4



Smoke Detection Panel SDS-4

Typ: SDS-4

Art.No.: SDS02.104

Smoke Detection Panel with 1 to 4 detection lines.

In addition to the components in the smoke detection panel SDS-0, the smoke detection panels SDS-4 and SDS-8 contain integrated detector boxes, located in an additional housing. Both housings are permanently attached to each other.

The hose connections for the detection lines and the connecting fittings for the fan unit are affixed to the upper housing.

Air samples from each detection line have to flow through the detector box with a built-in smoke detector assigned to the line. A pressure switch for monitoring the airflow in the detection line is attached to every detector box.

## Smoke Detection Panel SDS-8



## Smoke Detection Panel SDS-8

Typ: SDS-8

Art.No.: SDS02.108

Smoke Detection Panel with 5 to 8 detection lines.

In addition to the components in the smoke detection panel SDS-0, the smoke detection panels SDS-4 and SDS-8 contain integrated detector boxes, located in an additional housing. Both housings are permanently attached to each other.

The hose connections for the detection lines and the connecting fittings for the fan unit are affixed to the upper housing.

Air samples from each detection line have to flow through the detector box with a built-in smoke detector assigned to the line. A pressure switch for monitoring the airflow in the detection line is attached to every detector box.

## Smoke Detection Panel SDS-12



Smoke Detection Panel SDS-12

Typ: SDS-12

Art.No.: SDS02.112

Smoke Detection Panel with 9 to 12 detection lines.

In addition to the components in the smoke detection panel SDS-8, the smoke detection panel SDS-12 contains an additional permanently attached housing for up to 4 additional detector boxes.

The hose connections for the detection lines and the connecting fittings for the fan unit are affixed to the upper housing.

Air samples from each detection line have to flow through the detector box with a built-in smoke detector assigned to the line. A pressure switch for monitoring the airflow in the detection line is attached to every detector box.

## Extension Panel SDS-E8



Extension Panel SDS-E8

Typ: SDS-E8

Art.No.: SDS02.208

Extension Panel for 5 to 8 additional detection lines.

The extension panel consists of one or two housings permanently attached to each other. Detector boxes are located in these housings as in the upper housing of the smoke detection panel. In this way more detector lines can be connected to the smoke detection system.

Every extension panel is connected to the smoke detection panel not by the RS-485-bus, but rather directly via a 2-line cable (up to 8 additional lines) or via a 4-line cable (up to 16 additional lines).

## Extension Panel SDS-E12



Extension Panel SDS-E12

Typ: SDS-E12

Art.No.: SDS02.212

Extension Panel for 9 to 12 additional detection lines.

The extension panel consists of one or two housings permanently attached to each other. Detector boxes are located in these housings as in the upper housing of the smoke detection panel. In this way more detector lines can be connected to the smoke detection system.

Every extension panel is connected to the smoke detection panel not by the RS-485-bus, but rather directly via a 2-line cable (up to 8 additional lines) or via a 4-line cable (up to 16 additional lines).

## **Extension Panel SDS-E16**



Extension Panel SDS-E16

Typ: SDS-E16

Art.No.: SDS02.216

Extension Panel for 13 to 16 additional detection lines.

The extension panel consists of one or two housings permanently attached to each other. Detector boxes are located in these housings as in the upper housing of the smoke detection panel. In this way more detector lines can be connected to the smoke detection system.

Every extension panel is connected to the smoke detection panel not by the RS-485-bus, but rather directly via a 2-line cable (up to 8 additional lines) or via a 4-line cable (up to 16 additional lines).

## **Extension Compact Panel SDS-EC16**



Extension Panel SDS-EC16

Typ: SDS-EC16

Art.No.: SDS02.236

Compact Extension Panel for 9 to 16 additional detection lines.

The extension panel consists of one or two housings permanently attached to each other. Detector boxes are located in these housings as in the upper housing of the smoke detection panel. In this way more detector lines can be connected to the smoke detection system.

Every extension panel is connected to the smoke detection panel not by the RS-485-bus, but rather directly via a 2-line cable (up to 8 additional lines) or via a 4-line cable (up to 16 additional lines).

## Repeater Panel SDS-R48/G



Repeater Panel SDS-R48/G

Typ: SDS-R48/G



Art.No.: SDS02.300

Repeater Panel for wall mounting.

The repeater panel allows for optical and audible alarm of all fire alarms and fault warnings, parallel to the smoke detection panel, and for the operation of the smoke detection system. It can be installed at any place on the ship and is available in wall-mounted form or for installation in a console. It contains a control module like the smoke detection panel, but it doesn't have any connections to smoke detectors. The connection to the smoke detection panel takes place via the RS-485-bus. It is possible to connect max. three repeater panels to the system. The following connection terminals are available in the repeater panel:

- RS-485-bus from the smoke detection panel
- Combined fault warning (2 sets of voltage-free relay contacts)
- Combined fire alarm (2 sets of voltage-free relay contacts))
- General alarm (2 min delay, 1 set voltage-free relay contact)
- Output for additional sounder 24V (additional sounder optional)

## Repeater Panel SDS-R48/P



Repeater Panel SDS-R48/P

Typ: SDS-R48/P

Art.No.: SDS02.301

Repeater Panel for flush mounting.

The repeater panel allows for optical and audible alarm of all fire alarms and fault warnings, parallel to the smoke detection panel, and for the operation of the smoke detection system. It can be installed at any place on the ship and is available in wall-mounted form or for installation in a console. It contains a control module like the smoke detection panel, but it doesn't have any connections to smoke detectors. The connection to the smoke detection panel takes place via the RS-485-bus. It is possible to connect max. three repeater panels to the system. The following connection terminals are available in the repeater panel:

- RS-485-bus from the smoke detection panel
- Combined fault warning (2 sets of voltage-free relay contacts)
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- General alarm (2 min delay, 1 set voltage-free relay contact)

- Output for additional sounder 24V (additional sounder optional)

## Fan Unit SDS-M0440



Fan Unit SDS-M0440

Typ: SDS-M0440  
Art.No.: SDS02.440

Fan Unit for 220/230V 50/60Hz

Two fans are located in a common housing, consisting of one ventilator and one electric motor each, one of which is always running. Every 24 hours the smoke detection panel automatically switches over to the other fan. Likewise should there be a loss of function in one fan the other fan will be switched on.

The air supply and exhaust connections are located on the upper side of the fan unit. The fan unit comes delivered on vibration dampers.

The connections from the air supply and exhaust connections to the pipeline network are made with hose couplings.

## Fan Unit SDS-M0445



Fan Unit SDS-M0445

Typ: SDS-M0445

Art.No.: SDS02.445

Fan Unit SDS-M0445 plus housing



Fan Unit for 220/230V 50/60Hz

Two fans are located in a common housing, consisting of one ventilator and one electric motor each, one of which is always running. Every 24 hours the smoke detection panel automatically switches over to the other fan. Likewise should there be a loss of function in one fan the other fan will be switched on.

The air supply and exhaust connections are located on the upper side of the fan unit. The fan unit comes delivered on vibration dampers.

The connections from the air supply and exhaust connections to the pipeline network are made with hose couplings.

## **Relay Box SDS-REL24**



Relay Box SDS-REL24

Typ: SDS-REL24

Art.No.: SDS02.924

If needed, the optional relay module makes voltage-free fire alarm contacts available for every detection line. For smoke detection systems with up to 8 detection lines, the relay module can be integrated into the smoke detection panel.

For smoke detection systems with more than 8 detection lines a relay box is available, which exists of a relay module and an additional enclosure. To allow for short cable paths, the relay box can be positioned close to the ship's control system where its relay contacts should be connected. Connection to the smoke detection system takes place through the RS-485-bus.

## Relay Box SDS-REL1P



Relay Box SDS-REL1P

Typ: SDS-REL1P  
Art.No.: SDS02.935

Relay Box SDS02.935 for 1-3 Fan Units

## Downloads

[Downloads for SDS](#)