

# FS12

## Main Unit & Frame



**DNV type approved Control and Monitoring System for Fixed Aerosol  
Fire Extinguishing Systems in accordance with IMO MSC.1/Circ.1270**

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## Product Overview

The FS12 is a dedicated control and monitoring system designed specifically for fixed aerosol fire extinguishing systems for marine applications.

The FS12 provides activation and continuous supervision of the fire extinguishing system, including power supplies, loop communication, subunits, aerosol generators, detector input and external activation switches.

The system supports up to 50 aerosol generators, each connected through an individual FS12 Subunit. Two independent loop connections provide redundant communication and power distribution throughout the system.

The FS12 Main Unit can be surface mounted or flush mounted using the optional FS12 Main Unit Frame.

For more information see the FS12 Installation Manual



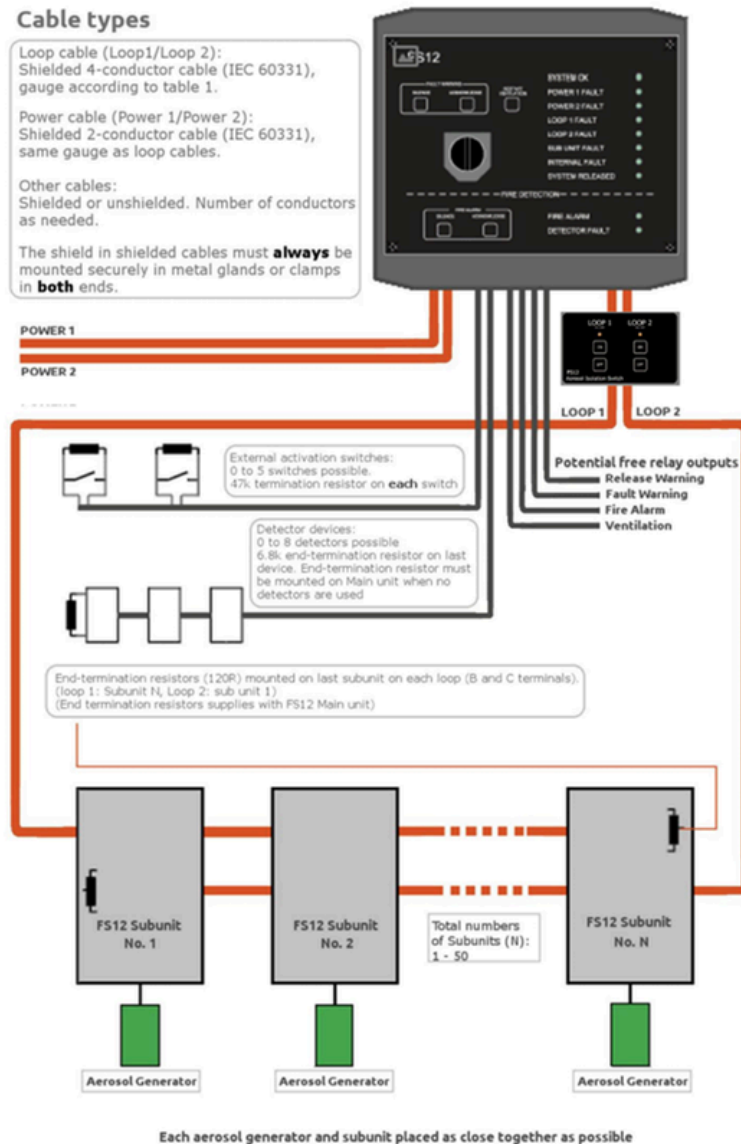
### Cable types

Loop cable (Loop1/Loop 2):  
Shielded 4-conductor cable (IEC 60331),  
gauge according to table 1.

Power cable (Power 1/Power 2):  
Shielded 2-conductor cable (IEC 60331),  
same gauge as loop cables.

Other cables:  
Shielded or unshielded. Number of conductors  
as needed.

The shield in shielded cables must **always** be  
mounted securely in metal glands or clamps  
in **both** ends.



### Key Features

- Dual independent 24 VDC power supply
- Supports up to 50 aerosol generators, each connected via an individual FS12 Subunit
- Redundant dual-loop system architecture
- Continuous supervision of power supplies, loops, subunits and aerosol generator connections
- One detector input supporting up to 8 detector devices
- Supports smoke, fire and flame detectors
- One external activation switches input, supporting up to 5 external activation switches
- Supports external isolation of the protected area
- Dedicated relay outputs for Fire Alarm, Release Warning, Fault Warning and Ventilation shutdown
- Internal fault diagnostics and debug logging
- Suitable for small and large marine installations
- DNV type approved

## Technical Specifications

| Parameter                                    | Value                                                 |
|----------------------------------------------|-------------------------------------------------------|
| <b>FS12 Main Unit</b>                        |                                                       |
| FS12 Main Unit – Dimensions (WxHxD)          | (179,2 x 199 x 109,5) mm                              |
| FS12 Main Unit – Weight                      | 1.25 kg                                               |
| FS12 Main Unit Frame– Dimensions (WxHxD)     | (255 x 253 x 3) mm                                    |
| FS12 Flush Mount – Weight                    | 0,475 kg                                              |
| <b>Electrical</b>                            |                                                       |
| Power supply                                 | 2 × 24 VDC nominal (–25% / +30%)                      |
| Supply voltage range                         | 18–31 VDC                                             |
| Nominal current                              | < 500 mA                                              |
| Total system current during activation       | < 3.5 A                                               |
| Operating temperature                        | –25°C to +70°C                                        |
| IP Rating                                    | IP44                                                  |
| <b>System / Aerosol generators</b>           |                                                       |
| Maximum aerosol generators                   | 50                                                    |
| FS12 Subunits                                | 1 Subunit per aerosol generator                       |
| Aerosol generator activation unit resistance | 0.5–4.0 Ω                                             |
| System architecture                          | Dual-loop redundant architecture                      |
| <b>Detector Input</b>                        |                                                       |
| Detector inputs                              | 1                                                     |
| Max. detector devices                        | 8                                                     |
| Detector EOL resistor                        | 6.8 kΩ                                                |
| Supported devices                            | Smoke / fire / flame detectors and compatible devices |
| Alarm resistance                             | 150–390 Ω                                             |
| Warning resistance                           | 410–1000 Ω                                            |
| No-alarm resistance                          | >480 kΩ (<50 µA @ 24 V)                               |

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## Technical Specifications (continued)

| Parameter                   | Value                                               |
|-----------------------------|-----------------------------------------------------|
| <b>Outputs</b>              |                                                     |
| Relay Output                | 24 VDC nominal, max. 8 A                            |
| Fire alarm                  | Potential-free relay output                         |
| Release Warning             | Potential-free relay output                         |
| Fault Warning               | Potential-free relay output                         |
| Ventilation                 | Potential-free relay output                         |
|                             |                                                     |
| <b>External Devices</b>     |                                                     |
| External Activations switch | Up to 5                                             |
| External Isolation switch   | Supported                                           |
| FS12 Main Unit Frame        | Optional                                            |
|                             |                                                     |
| <b>Approvals</b>            |                                                     |
| DNV                         | DNV Approved, TAA00000D3                            |
| IMO                         | Performance tested according to IMO MSC.1/Circ.1270 |

## Ordering Information

FS12 Main Unit – JKE Part No.: 0203

FS12 Main Unit Frame – JKE Part No.: 0206

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