

Voyage Data Recorder  
VDR / S-VDR

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# **SAL SVF-200 SAL SVS-200**

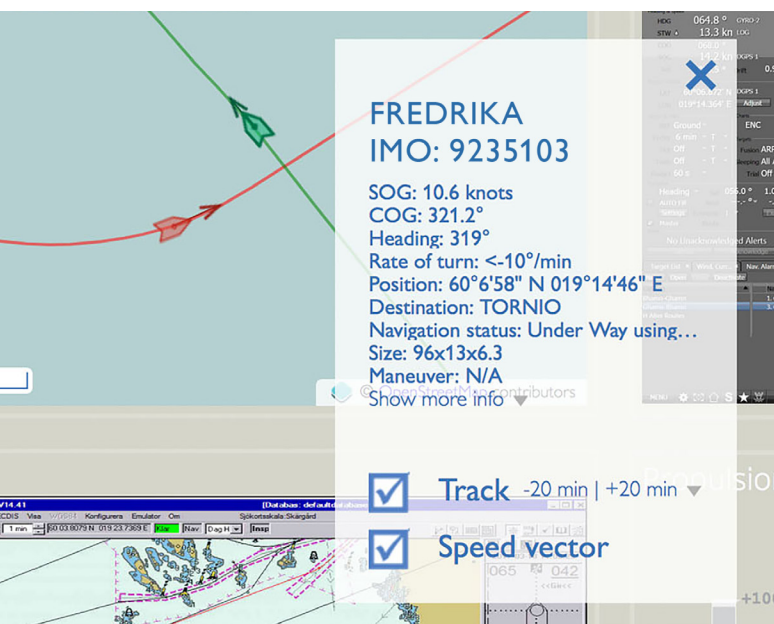
**Modular and easy to install.  
With intuitive playback and  
remote diagnostics.**

**VOYAGE DATA RECORDER  
DO NOT OPEN  
REPORT TO AUTHORITIES**



**SAL NAVIGATION**





**Intuitive playback.** For both onboard and onshore users. More functions are available through SAL Cloud, for example notifications upon certain events (such as high speed in combination with shallow depth).

**Supporting proactive fleet management through remote voyage analysis and diagnostics.**

**Modular and flexible.** The system is easily adapted to the specific needs on each vessel, and parts are quickly replaced if necessary. Through SAL Cloud, the system status can be monitored and diagnosed from shore.



## System Overview



### Capabilities

SAL SVF-200 and SAL SVS-200 are designed to robustly and continuously record all vital navigational instruments and alarm systems on any vessel. The most recent data is stored on a number of capsules and additional storage units.

Data is easily and securely extracted from the storage media and played back on specially designed playback software. Remote playback, voyage analysis and system diagnostics are also available to onshore users through SAL Cloud (optional).

So as to minimize installation time and cost, the system is modular and network-based. Modern Radar and ECDIS stations can be recorded over network, and for older stations (as well as for other screens) video grabber options are available, providing full flexibility.

### Standards

The system fulfills all necessary regulations, test and performance standards:

IMO Resolution A.694(17)  
IMO Resolution MSC.191(79)  
IMO Resolution MSC.302(87)  
IMO Resolution MSC.333(90)  
IMO Resolution MSC.163(78)  
IEC 61996-1 Ed. 2.0 (2013) incl. Corr. 1 (2014)  
IEC 61996-2 Ed. 2.0 (2007)  
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008)  
IEC 61162-1 Ed. 5.0 (2016)  
IEC 61162-2 Ed. 1.0 (1998)  
IEC 62388 Ed. 2 (2013), Annex H.4  
IEC 61162-450 Ed 1.0 (2011) + am1 (2016)  
IEC 61162-450 Ed 2.0 (2018)  
IEC 62923-1 Ed. 1.0 (2018)  
IEC 62923-2 Ed. 1.0 (2018)  
IEC 62288 Ed. 2.0 (2014)

### Key Figures

Recording period	Capsules: min. 48 hours, Long Term Storage: min. 30 days.
Battery backup	Two hours of recording upon power failure.
NMEA inputs	19 (standard), can be expanded.
NMEA outputs	1
Video inputs	4+ (over network or with video grabber), 15 sec. interval.
Audio inputs	8 microphones, 2 VHF (can be expanded).
Digital inputs (optional)	From 8 and up.
Analogue inputs (optional)	From 4 and up.





M/S Brännö

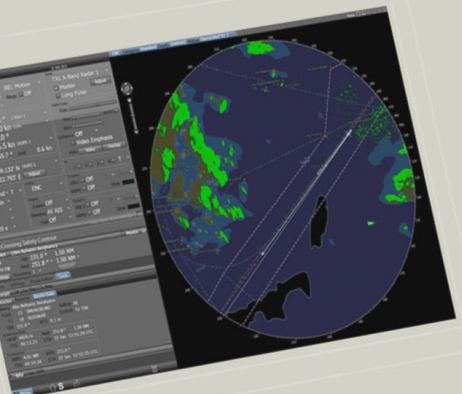
M/S Brännö (IMO 1234567)

2021-01-26 03:08:45

Position  
60°09'6" N 021°22'43" E



Radar



Propulsion



Navigation



Heading  
229.8 °  
Wind  
Relative speed  
9.1 kn  
Relative angle  
305.0 °

Thrusters



Alarms

Name  
Fire Alarm Failure  
Main Fire Alarm  
Water in Bow port

Status  
on  
off  
off

Doors

Firedoors  
Name  
Fire Door 9 D  
Fire Door 8 D  
Fire Door 7  
Fire Door 6

Rate of turn  
9.5 °/min

SOG  
9.0 kn  
STW  
8.7 kn  
COG  
236.0 °



## Playing back voyage data is **easier and more intuitive than ever.**

We provide several options for extracting and playing back voyage data, both on board and from shore via internet. Our playback software supports both PC and Mac, and through SAL Cloud the data can be securely accessed and played back directly in the web browser on any computer, tablet or smartphone.



**Rugged and  
durable hardware  
proven in use  
in all possible  
environments.**



## System Components

### Standard



Height: 570 mm  
Width: 440 mm  
Depth: 176 mm  
Weight: 19 kg

#### Main Unit

Operating voltage 115-230 VAC. 19 NMEA inputs (one high-speed) as standard (expandable). Network video recording. 30 days long-term data storage. Battery backup provides two hours of continuous recording upon power failure. Intuitive, web-based configuration tool.



Height: 144 mm  
Width: 144 mm  
Depth: 110 mm  
Weight: 0.3 kg

#### Display

Operating voltage 24 VDC. TFT color display. Buttons for user interface control. Operational Performance Test (OPT) routine. USB port for quick voyage data backup and diagnostics logs.



Height: 387 mm  
Width: 320 mm  
Depth: 320 mm  
Weight: 19 kg

#### Fixed Capsule \*

Operating voltage 24 VDC. Storage capacity 32 GB, recording period min 48 hours. Fire protection 60 minutes at 1100 °C, ten hours at 260 °C. Impact protection. Immersion: 6000 m depth for 30 days.



Height: 553 mm  
Width: 236 mm  
Depth: 214 mm  
Weight: 4.8 kg

#### Float-Free Capsule \*

Operating voltage 24 VDC. Storage capacity 32 GB, recording period min 48 hours. Immersion: 10 m depth at 5 minutes. Heating bracket available.



Height: 295 mm  
Width: 260 mm  
Depth: 52 mm  
Weight: 2.5 kg

#### Audio Mixer Unit

Operating voltage 24 VDC. Inputs: 8 microphones, 2 VHF radios. Output: up to 8 mpeg-compressed audio channels after mixing. Built-in headphones jack makes installation and trouble-shooting easy.



Height: 144 mm  
Width: 36 mm  
Depth: 40 mm  
Weight: 0.2 kg

#### Microphone

Frequency range 150 Hz - 6 kHz. Built-in self-test functionality. Can be fitted with outdoor housing (optional).

*\*) For a full VDR system, both capsules must be used. For S-VDR, one of the capsules is sufficient.*

### Optional



Height: 570 mm  
Width: 440 mm  
Depth: 176 mm  
Weight: 13.5 kg

#### Signal Converter

Operating voltage 115-230 VAC. Number of inputs adaptable by use of modules. Analogue converters: from 4 inputs and up with  $\pm 10$  V or  $\pm 20$  mA. Digital converters: from 8 inputs and up with dry contact. Typical use: 32 digital and 4 analogue inputs. Max: 144 digital or 48 analogue inputs per cabinet.



Height: 150 mm  
Width: 240 mm  
Depth: 40 mm  
Weight: 1.3 kg

#### Video Grabber Unit 2

Operating voltage 24 VDC. 3 x DVI contacts. Can record three screens (2 x DVI-D / DVI-A (VGA) + 1 x DVI-D) with resolution up to WUXGA (1920x1200) @ 60 Hz. Up to two modules can be used in parallel in the VDR system, thus covering six screens in total.



Height: 222 mm  
Width: 156 mm  
Depth: 147 mm  
Weight: 1.4 kg

#### Video Grabber Unit

Operating voltage 24 VDC. 2x5 BNC contacts. Can record two screens with resolution up to WUXGA (1920x1200) @ 60 Hz. Up to two modules can be used in parallel in the VDR system, thus covering four screens in total.



Height: 168 mm  
Width: 48 mm  
Depth: 51 mm  
Weight: 0.5 kg

#### Outdoor microphone housing

Protection class IP66. Modular design allows for using the same microphone for both outdoor and indoor installation.



Height: 295 mm  
Width: 260 mm  
Depth: 52 mm  
Weight: 2.5 kg

#### CloudBox

Operating voltage 115-230 VAC. Provides data storage from 250 GB and upwards. Connects to SAL Cloud via the vessel's internet connection. Configurable data category filters. Protected by built-in firewall.

*Product images not to scale, please refer to actual measurements. For more technical details, please see separate datasheets.*

**SAL Voyage  
Data Recorders  
provide insights  
for improved  
navigational  
safety.**

