# Danelec

# VDR Gateway
## VRS 002 G2
Datasheet

**The VRS 002 G2 – VDR Gateway stands as an efficient, plug-and-play solution designed for the cyber-secure distribution of VDR (Voyage Data Recorder) data onboard vessels.** This gateway acts as a robust firewall and proxy server, bridging the VDR with various networks and systems securely. It employs a secure "one-way" protocol to receive data from the VDR, ensuring the distribution of this data to multiple systems in various forms and formats, all while maintaining the VDR's optimal performance.

## Enhanced Functionalities with Feature Key
Upon installation of the feature key p/n 6305613, the VRS Gateway unlocks several advanced features, elevating its operational capabilities.

### Data Processing
Challenges in decoding IEC 61162-1 data, stemming from diverse source formats and units in different vessels, are seamlessly addressed by the VRS Gateway. It can decode and standardize data, presenting the data using an REST/JSON Interface. This feature greatly facilitates the integration and deployment of IT systems, including those not originally designed for marine settings, thereby boosting compatibility and user-friendliness.
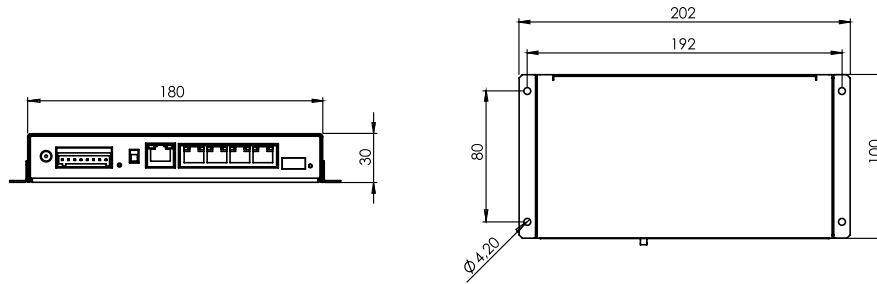
### Mini VDR Functionality
The Gateway may function as a simple VDR that can record and distribute additional sensor data that are irrelevant to the VDR, i.e., keeping the VDR installation as simple as possible. It may also be used to record and distribute data on a vessel where no Danelec VDR is installed.

### Advanced Motion Tracking/Inclinometer
The Gateway is equipped with a state-of-the-art motion tracking system, compliant with the ISO19697 standard, and in addition, capable of transmitting information about the vessel's pitch. This rich data regarding the vessel's movements and water positioning is critical for performance analysis and crucial to safety applications, offering a heightened level of operational insight and safety management.

## Product Specification

### Dimensions

| Dimensions | |
|---|---|
| Weight | 450 g |
| Height/Width/Depth | 30 x 202 x 100 mm |

### Interfaces

| Interfaces | |
|---|---|
| Ethernet (1000BASE-T) | 5 ports |
| RS-422 serial interface | 1 TX/RX |
| Digital inputs | 1 |

### Electrical

| Electrical | |
|---|---|
| Power supply | AC (110-230V, 50-60Hz) IEC 60945 nominal |
| Power consumption | 12-24VDC IEC 60945 nominal, 10W. 110-230VAC IEC 60945 nominal, 12W. |

### Environmental

| Environmental |
|---|
| IEC 60945 protected |

### Output Format

| Output Format | |
|---|---|
| Sensor data | IEC 61162-450 IEC 61162-450 sensor data format over TCP/IP REST/JSON API* |
| Images | UDP |

* Requires: VRS VDR Gateway, general feature key

### Cybersecurity

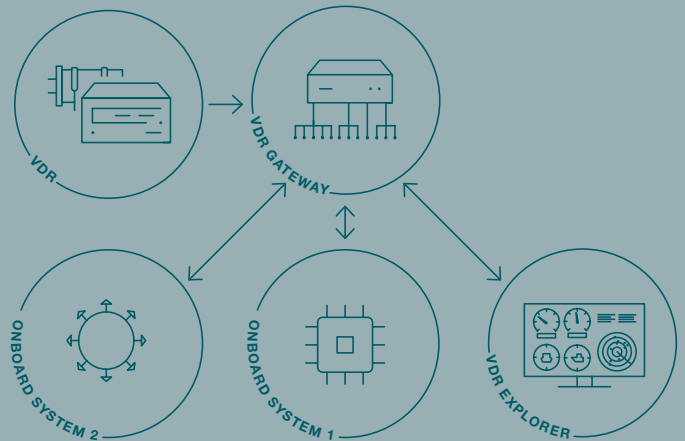| Cybersecurity | |
|---|---|
| Certification | IEC 61162-460 |

## Scope of Supply

| P/N | Description |
|---|---|
| 1305590 | VRS 002 - VDR G2 Gateway (with AC adaptor and CD) AC plugin adaptor, 110-230VAC, various plug types Mounting brackets - kit |
| **Option** | |
| 6305613 | VRS VDR Gateway, general feature key |

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## Integration with VDR Remote Services

Enabling access to Danelec's comprehensive cloud services is straightforward, providing a suite of advanced functionalities.

**Remote Monitoring and Configuration:** Efficient remote monitoring and configuration of the VDR, ensuring optimal performance and ease of management from any location.

**Incident Data Retrieval:** In the event of an incident, download the complete data set from the VDR, providing critical insights and facilitating prompt response and analysis.

**Regular Data Transmission to Shore:** Easily transmit selected data sets to shore-based operations, ensuring continuous monitoring and up-to-date information flow, enhancing operational efficiency and decision-making processes.