

V-Track™

V-03 Informer™



TIDELAND ENGINEERED

V-Track™ Informer™ is an AIS information provider and remote monitoring system for use on marine aids to navigation (AtoNs) and other structures. Informer is available in two options: “Type 1” is a transmit only device, “Type 3” is a transmit and receive device and can also be used as an AIS repeater. For most applications a transmit only device provides the ideal AIS AtoN solution.

Informer is a compact unit housed in a rugged environmental enclosure for use on any AtoN. With a power consumption of less than 0.5 Ah/day, Informer is suitable for all solar installations, including buoys anywhere in the world. The input voltage of 12 VDC or optional 24 VDC is compatible with most AtoN power systems.

Tideland Signal has adopted the emerging IEC standards defining the functions and message structure contained within the AIS AtoN message. Informer is also designed to IEC 62320-2, IMO requirements and IALA recommendations. It is BSH approved.

In addition, the Type 1 or 3 Informer also has optional remote monitoring capabilities. It is capable of the remote monitoring of any manufacturer’s AtoN. When monitoring a Tideland Signal lantern the standard system provides: lantern status, number of remaining lamps, battery voltage (loaded and unloaded), sunswitch status, active flash code, flash code setting, solar voltage and lamp current.

Informer broadcasts AtoN message 21 and also allows broadcasting of weather and sea data on message 6 or 8 as a Binary Message or as a Text Message on message 12 or 14. Remote monitoring information is broadcast on message 6.

PROGRAMMING SOFTWARE

V-03 Informer is supplied with a comprehensive software application that enables you to program the unit via an RS232 interface.



V-Track V-03 Informer with the VHF and GPS antennas.

MONITORING SOFTWARE

To assist in monitoring the AtoN, an additional software package is supplied that can be run on any PC or laptop which, when plugged into the display port of any AIS mobile unit or base station, displays transmitted AIS and also the remote monitoring information (as an option).

REPEATER OPTION

The AIS Simplex Repeater is a store and forward process in which a different time slot is used for retransmission. The retransmission will be on the same channel as that in which it was received as defined in ITU-R M.1084. The AIS Simplex Repeater applies filters to reduce the amount of data repeated over the VDL.

The AIS Simplex Repeater can synchronise to any AIS station that has direct UTC. It will repeat all AIS messages, ship board and land based, within a specific geographical area. In addition, it can further filter all of those messages found within the geographical area according to Message ID.

SPECIFICATIONS

| | |
|--------------------------|---|
| Designation | Automatic Identification System (AIS) for AtoNs |
| Serial RS232 Interface | 2 x connectors, remote monitoring and remote programming |
| Power Supply | 9 to 15.6 VDC nominal |
| Type 1 Power Consumption | Typically < 0.5 Ah/day @ 13.6 V (+50% if optional isolated power supply is used) |
| Type 3 Power Consumption | Typically < 1 Ah/day @ 13.6 V (+50% if optional isolated power supply is used) |
| Temperature Range | -40°C to +55°C |
| Frequency Stability | +/- 3 ppm |
| Compass Safe Distance | 1 metre |
| EMC | Per IEC 60945 protected |
| Salt Fog and Vibration | As defined in IEC 60945 |

NOTE: Specifications are subject to change.



TECHNICAL INFORMATION

MESSAGE 21 CONTENT

- MMSI Number
- Name of AtoN
- Position
- Position Accuracy
- RAIM Indicator
- Type of Position Fixing Device
- Time Stamp
- Dimension of AtoN
- Type of AtoN
- Virtual AtoN Target Flag
- 8 bits reserved for regional application

ANTENNA

GPS: Low profile marine
VHF: Marine with lightning protection
(Option of combined antenna)

AIS RECEIVERS (Only used on V-03 Type 3)

AIS Data Rate: 9,600 bits/s
Sensitivity: ≤ 20% at -107 dBm
Blocking: 80 dB
Intermodulation: 65 dB
Large Signal PER: 2% at -7 dBm or lower
Image Rejection: ≥ 70 dB for 20% PER
Spurious Rejection: ≥ 70 dB for 20% PER

NAVIGATION SPECIFICATIONS

12 channel internal Global Positioning System.

CONTROL

FATDMA for Type1 and FATDMA, RATDMA for Type 3.

FREQUENCIES AND CHANNEL BANDWIDTH

AIS1: 161.975 MHz 25 kHz
AIS2: 162.025 MHz 25 kHz
Frequency Stability: +/- 3 ppm

AIS TRANSMITTER

Output Power: 1 to 12.5 W
Harmonic Emission: ≤ 66 dBc (≤ 0.25 uW)
Spurious Emission: ≤ 66 dBc (≤ 0.25 uW)
Ramp Up: ≤ 1 ms
Ramp Down: ≤ 1 ms
Channel Protection: 1s max on air
Frequency Accuracy: +/- 3 ppm

TRANSMISSION

Adjustable, preset to IALA recommendation of one transmission every 3 minutes.

REPEATER

The following message types can be repeated: 1, 2, 3, 5, 6, 7, 8, 12, 13, 14, 15, 18, 19, 21, 24, 25, 26.

Control of maximum allowable repeat messages/minute (default 500).

Dynamic transmission control applies FATDMA and/or RATDMA.

ENCLOSURE

Length: 120 mm x 120 mm x 124 mm
Weight: 2.5 kg maximum
Material: SST or Marine Grade Aluminium
Protection: NEMA 4X

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ISO 9001:2008
Certificate
Number: 30061

ISO 9001:2008

Tideland Signal Corporation maintains ISO 9001:2008 accreditation. It is company policy to provide products and services that meet the highest standards of quality in the industry.

Membership Organisations



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