V5043

Class A AIS Transceiver

An IMO Type approved Class-A AIS transponder system. A full-featured Class-A AIS offering everything needed for compliance at an excellent value. V5043 AIS is also type approved for Inland AIS applications.

Safety and Awareness

Adding AIS to navigation for spontaneous 'ship to ship' or 'ship to shore' recognition greatly enhances safety at sea and provides mariners with new levels of real-time information.
It provides you an instant overview of traffic situations and the manoeuvres of other ships. Whilst the call signs presented on the AIS display allows you to contact other ships easily. Detailed information on AIS enabled ships helps Navigation in radar blind zones.

Wheelmark approved

Standalone Operation

The V5043 is a compact bracket or panel-mount unit with a larger, 4.3-inch color display with a user-friendly interface and 11 key, backlight keypad. It can be configured and operated without any external display or controller, and provides AIS information to the operator in radar-style, alphanumeric (textual list of contacts), and GNSS satellite display modes.

Complete AIS Solution with Comprehensive Connectivity

The V5043 has a junction box providing three bi-directional NMEA 0183® ports and NMEA 2000® bus for connection to multiple external sensors (e.g. heading, gyro), and sharing of AIS data for display by navigation systems, such as the Simrad® MX610, or MX612, and ECS/ECDIS.
Pilot Plug connection available on front panel, or via wired remote connection.

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SIMRAD®

Key Features

- IMO type approved Class-A AIS transponder
- Larger, integrated 4.3-inch color display
- User-friendly interface with easy keypad operation
- Radar, alphanumeric (text), and GNSS satellite display modes
- Includes AIS Junction Box with NMEA 0183®/2000® and sensor connections, GPS antenna, pilot plug assembly, cables and mounting hardware
- Multiple sensor input ports and bi-directional data ports
- Connects to Simrad® MX610/MX612 navigation systems and E5000-series ECDIS

Specifications

APPLICABLE STANDARDS	
IEC 61993-2 Ed.3.0, 2018	IMO Resolution A.694(17)
IEC 61108-1 Ed.2.0, 2003	IMO Resolution MSC.74(69) Annex 3
IEC 60945 Ed.4.0, 2002 incl. Corr. 1, 2008	IMO Resolution MSC.191(79)
IEC 61162-1 Ed.5.0, 2016	IMO Resolution MSC.302(87)
IEC 61162-2 Ed.1.0, 1998	ITU-R M. 1371-5 (Class A), 2014
IEC 61162-450 Ed.2.0, 2018	IEC 62288 Ed.3.0, 2021
IEC 62923-1 Ed. 1.0, 2018	IEC 62923-2 Ed. 1.0, 2018
CESNI Inland AIS test standard Ed. 2021/3.0	
VHF TRANSCEIVER	
Frequency range	156.025 MHz-162.025 MHz
Channel bandwidth	25 kHz
Modulation	GMSK / FM
Data rate	9,600 bps
Number of AIS transmitter	1
Number of AIS receiver	2
Number of DSC receiver	1
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx power output	1/12.5 W (30/41 dBm ± 1.5 dB)
Rx sensitivity	< -110 dBm @ 20% PER at 20°C
DSC RECEIVER	
Frequency	156.525 MHz
Modulation	FSK
Channel bandwidth	25K
Sensitivity	< -112 dBm @ BER < 10^{-2}
Spurious response rejection	≥ 70 dB for signal @ -104 dBm; BER ≤ 1 %
Blocking	≥ 84 dB for signal @ -104 dBm; BER ≤1 %
GPS (GNSS) RECEIVER (INTERNAL)	
Receiver type	72-channel; GPS, GLONASS, BeiDou, Galileo, SBAS: WASS, EGNOS, MSAS, GAGAN
Accuracy	Position: 2.5 m CEP SBAS: 2.0 m CEP
Sensitivity	Default mode: GPS & GLONASS Tracking and Navigation: -164 dBm Reacquisition: -160 dBm
GPS (GNSS) ANTENNA	
Cable type	RG58A/U or equivalent
Cable length	10 m
Connector	TNC (male)
POWER SUPPLY	
Supply voltage	12 V DC or 24 V DC
Supply voltage range	9.6 V DC—31.2 V DC
Peak current draw	3.60 A @ 12 V DC; 1.72 A @ 24 V DC

LCD DISPLAY	
Screen size	4.3" color TFT
Pixel number (resolution)	480x272
Dimmer control	Change brightness manually or automatically
Nominal viewing distance	0.52 m
ENVIRONMENTAL	
Operating conditions	IEC 60945 "protected" category
Operating temperature	-25°C to +55°C
Operating humidity	93% RH at 40°C
Waterproof	IP54
PHYSICAL	
Width	238 mm (9.37")
Height	135 mm (5.32")
Depth (including connectors)	192.6 mm (7.58")
Weight (main unit)	1.25 kg
PILOT PLUG (OPTIONAL)	
Cable length	2 m
Connector type	206486-2
V5043 MAIN UNIT FRONT PANEL	
USB	Mini type-B USB interface
SD® card slot	MicroSD® type
Pilot plug	206486-2
V5043 MAIN UNIT REAR PANEL	
Power connector	Round type, 3 pins
GPS antenna connector	TNC (female)
VHF antenna connector	SO-239 (female)
Ethernet	Compliance with IEC 61162-450
Data	37-pins, connect to junction box via extension cable
JUNCTION BOX CONNECTORS [*BAUD RATE SUPPORT: 38400 9600, 4800.]	
Sensor interfaces 1 to 3*	IEC 61162-1 or -2 (default baud rate: 4800)
Pilot/auxiliary*	IEC 61162-2 (default baud rate: 38400)
External display*	IEC 61162-2 (default baud rate: 38400)
Long range*	IEC 61162-2 (default baud rate: 38400)
DGNSS correction input*	RTCM-SC-104
Alarm relay	Normally closed
NMEA 2000®	IEC 61162-3
Alarm output	Relay contact
Blue sign switch	Connect to external blue sign switch

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