

AIS SOTDMA Class B Transponder

WideLink B600



Product Overview

WideLink B600 is an SOTDMA AIS class B, the next evolution of AIS technology. Its 5W transmit power, higher reporting rate and professional grade time division management make B600 an overall more advanced product compared to AIS class B based on CSTDMA scheme.

The globally approved transponder contains 1 VHF transmitter, 2 AIS receivers on 2 VHF channels and 1 MCU with cutting edge software defined radio technology. Its internal GNSS receiver with 50 channels is able to process signals from GPS, Gallieo, Beitou and Glonass with differential capability. It receives DSC, time-sharing with AIS receivers.

Its enhanced housing with IPx7 waterproof and shock and temperature robustness is ideal to survive harsh marine environments. Chart plotter and PC can be easily integrated over its NMEA2000, NMEA0183 and waterproof USB port. Its built-in data logger can record AIS data on micro SD card in the most intuitive way.

Key Features

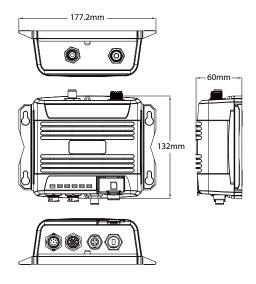
- New generation AIS Class B transponder based on advanced SOTDMA technology
- Support 5 watt AIS output power for longer transmission range
- ► Enhanced AIS transmit scheme which improves operational performance compared to conventional CSTDMA Class B technology
- NMEA 2000, dual NMEA 0183 and USB connectivity
- ▶ Support NMEA2000, NMEA0183, USB, and WiFi (option) connectivity
- Compact and robust housing, IP67 waterproof
- Optional silent-mode (Tx-off) operation
- ► Support alarm relay output
- ▶ Built-in SD card-slot for data logging capability
- Compliant with new IEC 62287-2 international standards
- ► Tested and approved by BSH, CE RED certified







DIMENSIONS



SPECIFICATIONS

APPLICABLE STANDARDS

ISO MSC. 74(69) Annex IEC 60945 Ed. 4.0:2002 ITU-R M. 825-3:1998 IEC 61108-1 Ed. 2.0:2003 ITU-R M. 1084-5:2012 IEC61162-1 Ed. 5.0:2016 IEC61162-2 Ed. 1.0:1998 ITU-R M. 1371-5:2014 IEC 62287-2 Ed. 2.0:2017 EN 300 440 V2.1.1 (Final Draft) EN 62311:2008 EN 300 328 V2.1.1 EN 301 489-1 V2.1.0(Draft) / EN 301 489-3 V2.1.0(Draft) EN 301 489-1 V2.1.0(Draft) / EN 301 489-17 V3.1.0(Draft) EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

VHF TRANSCEIVER

Frequency Range 156 025 MHz ~ 162 025 MHz

Access Scheme SOTDMA Channel Bandwidth 25 KHz Modulation GMSK / FM Data Rate 9,600 bps Number of AIS Transmitter

Number of AIS Receiver 2 (one time-shared between AIS and DSC)

Number of DSC Receiver 1 (time-shared between AIS and DSC)

AIS Channel 1 CH 87B (161.975 MHz) AIS Channel 2 CH 88B (162.025 MHz) Tx Power Output 5 Watt (37 dBm ± 1.5 dB)

1 Watt (30 dBm ± 1.5 dB)

Rx Sensitivity < -107 dBm @ 20% PER Rx Message Format AIS Class A & B messages

DSC RECEIVER

Modulation 1,300 Hz / 2,100 Hz FSK Data Rate 1,200 bps ± 30 ppm

Spurious Response Rejection \geq 70 dB for signal @ -104 dBm; BER \leq 1 % Blocking \geq 84 dB for signal @ -104 dBm; BER \leq 1 %

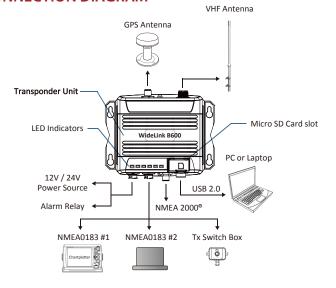
GNSS RECEIVER (INTEGRATED)

Receiving Channels 50 channels

Accuracy IEC 61108-1 compliant

Output Rate 1 Hz Support: GPS, Gallieo, Beitou, Glonass

CONNECTION DIAGRAM



POWER SUPPLY

12V / 24V DC, 2A Supply Voltage

Typically less than 3W average @ 12V DC **Power Consumption**

CONNECTION INTERFACE

TNC (Female) GPS Antenna Connector VHF Antenna Connector SO-239 (Female) NMEA 2000 Standard connector

NMEA 0183 (RS-422) Support two NMEA 0183 interfaces

> Default baud rate 38,400 & 4,800bps Configurable and separate Tx/Rx baud rate

Standard IEC 61162-1 / IEC 61162-2 sentences Silent Mode Setting Set by dedicated pins in the 12-pin cable Internal Alarm Relay Setting Set by dedicated pins in the 8-pin cable

Mini-B type, waterproof

ENVIRONMENTAL

Operating Conditions IEC 60945 "protected" category **Operating Temperature** -15°C ~ +55°C (+5°F ~ +130°F) IP67

Waterproof

PHYSICAL

Width 177 mm (6.97 inches) Height 60 mm (2.36 inches)

Depth 132 mm (5.20 inch) (exclude connector)

Weight

SOFTWARE TOOL

AMEC AIS Configuration, AMEC AIS Viewer, AMEC AIS App

COMPASS SAFETY DISTANCE

Standard Magnetic Compass 0.30m Steering Magnetic Compass 0.30m

GA-22 GPS ANTENNA (OPTIONAL)

Cable Integral 10m RG-174 cable plus mounting bracket

Supply Voltage

Wi-Fi POWER (B600W ONLY)

Tx Transmit Power 19.53 dBm (EIRP) Frequency Range 2412 MHz ~ 2462 MHz

Note: Specifications are subject to change without prior notice







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