



# Transponder Technical Specifications

- **Power requirement** 21,6-31,2 V DC
- **Number of transmitter** 1
- **Number of receiver** 3 (2 AIS TDMA, 1 DSC)
- **Frequency rate** 156.025 –162.025 MHz
- **Channel spacing** 12.5 ve 25 kHz
- **TX to Rx turnaround time** < 1 ms
- **Channel selection time** < 26 ms
- **Baud rate** 9600 bps
- **Modulation scheme** 25 kHz FSK (DSC)
- **Carrier power (adjustable)** 33 ve 41 dBm (2 ve 12,5W) 50 Ohm load
- **Sensivity 20% MER**
  - < -107 dBm AIS for 25 kHz
  - < -98 dBm AIS for 12,5 kHz
- **GNSS receiver** 12 parallel channels
- **DGNSS support** Yes





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- **Environmental** EC 60945
- **Electrical interfaces**
  - **Sensor interfaces 1 to 3** RS485 IEC61162-1 to 2
  - **Pilot/Auxiliary** RS485 IEC61162-2
  - **External display** RS485 IEC61162-2
  - **Long range** RS485 IEC61162-2
  - **DGNSS correction input** RS232 RTCM-5C-104
- **Physical characteristics**
  - **Size (WxHxL)** 175x81x276 mm.
  - **Weight** 3,9 kg.
  - **Cooling** Not required





# Minimum Keyboard and Display (MKD)

The MKD is equipped with a text display containing four lines with 20 characters each and a 16-button keyboard.

When the system is powered up for the first time the view below will be displayed on the MKD.

Data that needs to be configured when starting a new system for the first time



**MKD 1,2 kg. 120x180x45 mm.**



# Connection Unit (CU)

The power supply to the transponder is provided via the Connection Unit.

The Connection Unit is used for convenient connection of ship's equipment such as sensors and external systems for monitoring and control of AIS information.

The Connection unit have EMC filters on all signal interfaces and the power input.

The bridge alarm can be connected at the Connection unit.



*Connection Unit 1,1 kg. 175x345x75 mm.*

# External Interfaces





# Power Supply Interfaces

**The input power to the systems should be connected to the screw terminal in the Connection Unit.**

**The systems delivered with an interface cable to connect the Transponder connector P1 with the Connection Unit.**

**Mechanical interface: Screw terminals**

**Electrical Interface: 24 V DC (-10%, +30%), max 3A, negative return**

# Data Link Interfaces

**All ship's sensors needed for the AIS Class A and other equipment shall be connected to the Connection Unit via screw terminals.**

Port	Type	Designation	Electrical interface	Logical interface
1	Input	Sensor 1	RS-485	IEC 61162-1 configurable as -2
2	Input	Sensor 2	RS-485	IEC 61162-1 configurable as -2
3	Input	Sensor 3	RS-485	IEC 61162-1 configurable as -2
4	Input/output	Pilot/Auxiliary	RS-485	IEC 61162-2
5	Input/output	External Display	RS-485	IEC 61162-2
6	Input/output	Long Range	RS-485	IEC 61162-2
7	Input/output	MKD	RS-485	CNS proprietary
8	Output	Alarm Relay	Closed/Not closed	Normally Closed
9	Input	DGNSS corr.	RS-232	RTCM-SC-104 Type 1 and Type 9

# Other Interfaces

- **Maintenance Interface (J1)**
- **VHF Antenna Interface (J3)**
- **GNSS Antenna Interface (J6)**

