

## MiniPlex-AIS

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The MiniPlex-AIS is an [NMEA multiplexer](#) dedicated to be used with Raymarine® C/E-Series displays. It enables the use of an AIS receiver\*, a Smart Heading Sensor and other NMEA compatible instruments at the same time.

The MiniPlex-AIS has 4 galvanically isolated NMEA inputs, 2 NMEA outputs and one RS-232 interface.

Three inputs operate at the standard NMEA communication speed of 4800 baud and one input operates at 38400 baud, as used by AIS receivers. One NMEA output also operates at 38400 baud, to be connected to the NMEA input of a Raymarine® C/E-Series display.



### AIS and Raymarine® C/E-Series displays

Raymarine recently added AIS support to their C/E-Series displays. Since these displays only have one NMEA port, selecting AIS mode effectively disables interoperation with other standard NMEA devices like the widely used Raymarine Smart Heading Sensor.

To overcome this problem, the MiniPlex-AIS was developed. Connected to a C/E-Series display running in AIS mode, it provides four NMEA inputs. One operates at 38400 baud and is dedicated to be connected to an AIS receiver while three other inputs operate at 4800 baud (NMEA standard), thus allowing a Smart Heading Sensor to be used at the same time.

In case the C/E-Series display needs to drive an autopilot over NMEA, the MiniPlex-AIS also offers a speed conversion from 38400 baud back to 4800 baud. When the RS-232 input is connected to the NMEA output of the C/E-Series display, the transmitted NMEA data is available on a second NMEA output on the multiplexer, at a speed of 4800 baud.

The MiniPlex-AIS is completely transparent to NMEA data. Incoming data is simply stored and forwarded as complete NMEA sentences to the connected display.

\*) Due to a design flaw of the widely used NASA AIS receiver, it is not possible to use this receiver with the MiniPlex-AIS. The output of this receiver is not compliant with the RS-232 or RS-422 standard and cannot deliver sufficient signal to drive the input of the MiniPlex-AIS.

**Specifications:**

Supply voltage:	8-30V <sub>DC</sub> , secured against reversed polarity.
Current consumption:	40mA (70mA max. with fully loaded talker ports)
Inputs:	4 x NMEA-183/RS-422, galvanically isolated. 3 x 4800 baud, 1 x 38400 baud. 1 x RS-232 at 38400 baud
Outputs:	1 x RS-232 at 38400 baud 1 x NMEA-183/RS-422 at 38400 baud 1 x NMEA-183/RS-422 at 4800 baud
Buffers:	5 buffers of 800 characters (4 x NMEA, 1 x RS-232)
Compliance:	EN/IEC 60945 and EN/IEC 61162-1
Dimensions:	138 x 62 x 30mm