

# universal interface box installation

IS-2509-02



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## **CE Certification:**

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by relocating the equipment or connecting the equipment to a different circuit. Consult an authorised dealer or other qualified technician for additional help if these remedies do not correct the problem.

This device meets requirements for CFR47 Part 15 of the FCC limits for Class B equipment.

The h1000 meets the standards set out in European Standard EN 60945: 1997 IEC 945: 1996 for maritime navigation and radiocommunication equipment and systems.

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## trademark

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## technical specifications

Dimensions:	70mm x 135mm x 35mm
Power Supply:	12V dc nominal (10V to 16V) via Fastnet <sup>2</sup>
Current Consumption:	50mA typical
Operating Temperature range:	0°C to +55°C
Storage Temperature range:	-25°C to +70°C
Humidity:	Up to 95% RH



## supported NMEA sentences (v2.40)

### NMEA input (received) summary

<b>NMEA Sentence</b>	<b>Message Description</b>
APB	Heading/Track Controller (Autopilot) Sentence "B"
DBT	Depth Below Transducer
DPT	Transducer Depth and Offset
GGA	Global Positioning System Fix Data
GLL	Geographic Position, Latitude and Longitude
GSA	GNSS DOP and Active Satellites
GSV	GNSS Satellites in View
HDG	Heading Magnetic, Deviation and Variation
MWD	Wind Direction and Speed (TWD °M / °T and TWS)
MVV	Wind Speed and Angle (AWS and AWA, flag set to R)
RMB	Recommended minimum navigation information
RMC	Recommended minimum specific GNSS data
VHW	Water Speed and Heading (°M / °T)
VTG	Course Over Ground and Speed Over Ground
ZDA	Time and Date
ZTG	UTC and Time to Destination Waypoint

## supported NMEA sentences (v2.40), continued

### B&G proprietary NMEA input (received) summary

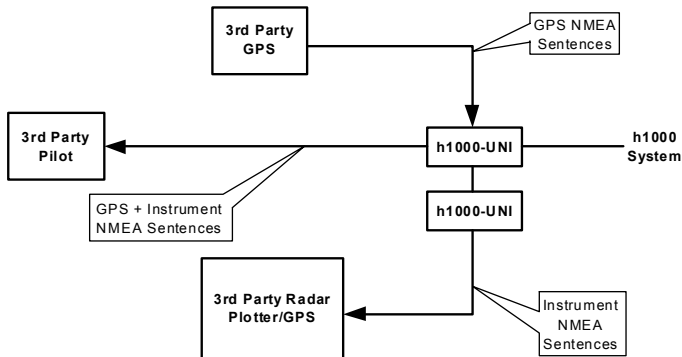
NMEA Sentence	Message Description
PBGTBS	Polar speed (knots)
PBGTLAY	Distance and Time to Lay-Line
PBGTVMG	Angle for best VMG upwind (polar) Upwind heading for best VMG (polar) Downwind heading for best VMG (polar)

### NMEA output (transmitted) summary

NMEA Sentence	Message Description
DPT	Transducer Depth and Offset
GGA	Global Positioning System Fix Data
GLL	Geographic Position, Latitude and Longitude
HDG	Heading Magnetic, Deviation and Variation
HDM	Heading, Magnetic
HDT	Heading, True
MTW	Water Temperature, °C
MWD	Wind Direction and Speed (TWD °M / °T and TWS)
MWV	Wind Speed and Angle (AWS and AWA, flag set to R)
RMB	Recommended minimum navigation information
RMC	Recommended minimum specific GNSS data
VHW	Water Speed and Heading (°M / °T)
VLW	Distance Travelled through the Water
VTG	Course Over Ground and Speed Over Ground

## selectable NMEA

The Selectable NMEA feature allows control over which sentences are received and transmitted by the h1000 Universal Interface. This gives flexibility when interfacing to other manufacturers' products such as radars and chart-plotters. Selectable NMEA allows you to filter out unwanted NMEA messages and prevents duplicated data on the system.



### Configuring Selectable NMEA

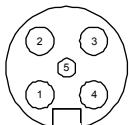
Identify the Universal Interface Box you wish to configure, this is identified by the first three digits of the serial number found on the printed label located inside the lid of the interface box. Select the chosen box from the list displayed, select either **NMEA In** or **NMEA Out**. The options available are detailed as follows:

**Selecting NMEA Input sentences – 'Current Input'** - Press **ENTER** to select, press **ENTER** again and scroll through the listed sentences, press **ENTER** to view the options. Press **ENTER** and scroll to either **On** or **Off**, press **ENTER** to make your selection. Scroll to **OK** to return to the listed sentences. Repeat the operation until you have made all your selections.

**Selecting NMEA Output sentences – 'Current Output'** - Follow the same procedure as detailed above.

**Renaming the interface box – 'Name'** - Press **ENTER** to re-name the interface box (if required), use the **UP/DOWN** arrow keys to select the number or letter required (maximum 10 characters), once you have completed your name change scroll to, and highlight **OK**, press **ENTER** to return to the Remote units screen.

## electrical connections



Front view of  
male connector pins

## external connections

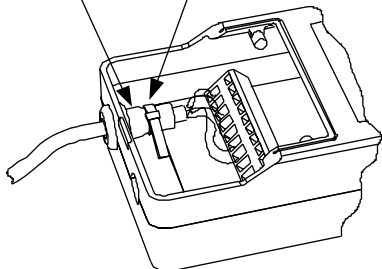
Two Fastnet<sup>2</sup> connectors are provided on the top of the unit. These connectors allow connection to the rest of the system for the supply of power and data.

The table below shows pin functions.

Pin Number	Signal
1	12V
2	Busy
3	Fastnet <sup>2</sup> -
4	Fastnet <sup>2</sup> +
5	0V

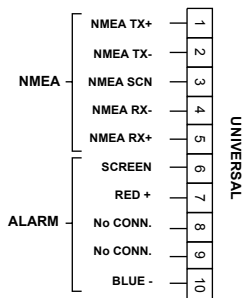
GROMMET

CABLE TIE



Push the cable(s) through the grommet so that the outer insulation shows beyond the grommet and secure using a cable tie as shown in the diagram opposite

## electrical connections



### internal connections

Wire the cables into the interface box as shown in the diagram opposite.

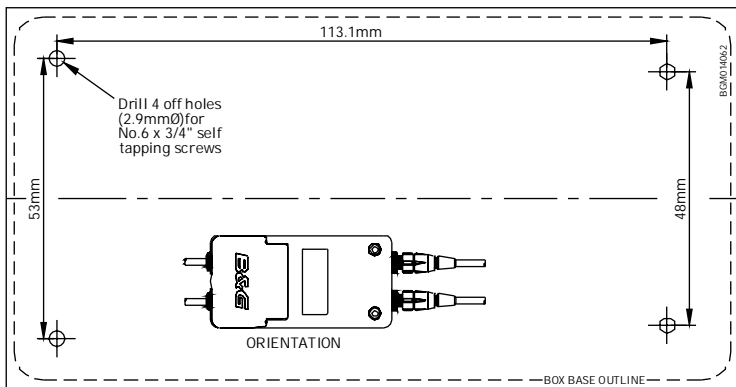
method

To open the connector, carefully push a small flat headed terminal screwdriver into the slot directly above the relevant terminal number.

Push the bare end of the wire into the terminal connector and withdraw the screwdriver.

Note: The maximum sink current for any alarm connected to this interface box is 18mA.

## installation



**WARNING: THIS DRAWING IS NOT TO SCALE**

Use the Installation instructions and the template provided with the unit packaging to install the Interface Box.