HBU-208B NMEA Buffer User's Manual

(Edition 4.1b)

The HBU-208B NMEA Buffer is a high reliable serial data distributor (splitter) for relaying shipboard NMEA-0183 data from 2 signal talkers to 8 listeners.

This NMEA buffer can receives any type of NMEA-0183 (RS-422), RS-232 or 5V TTL signal, and send it through 8 RS-422 ports. The output port 7 & 8 can be changed for RS-232 mode.

This NMEA buffer has 2 input ports protected from over voltage, and any one input port is selected automatically or manually when no data at another input port.

This NMEA buffer provides full DC isolation between input signal, output signal and input power supply.

I. Features

- NMEA-0183, ISO/IEC61162-1, ITU-X.27/V.11 standards compliance.
- Protect all input and output ports from careless wiring, over voltage, transient voltage, surge noise and output short.
- Provide RS-232 signal (up to 2 Ports)
- Even if one input signal doesn't come, another input is automatically (or manually) selected and output continuously.
- Use electronic fuse and no change required.

2. Installation

1) Wiring

From left, input power, data inputs (A, B), data outputs $(1 \sim 8)$, and the details are as followings.

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POWER		IN 1	N2	OU	IT 1	OU	T 2	OU	Т 3	OU	T 4	OU	T 5	OU	IT 6	OU	T 7	OU	T 8		
+2	+24V- FG		+A-B+A-B		+A	+A -B		+A -B		+Tx -G		+Tx -G									

- POWER: DC24V(18~32V) Input
- IN 1 \sim IN 2 : NMEA data input ports. RS-422, RS-232 and 5V TTL signals can be used.
- OUT1 ~ OUT8 : NMEA data output ports.
- * OUT 7 \sim OUT 8 : Support both NMEA(RS-422) and RS-232 signals, and selected by SW7, SW8. (Refer to "3)")

2) Auto/manual selection of Input signal (DIP SW)

A DIP SW-1 at left panel is used for specifying either automatic or manual selection of input data, a DIP SW-2 is used to specify prior selected input data.

If DIP SW-1("Man/Auto") is "Man(down)" position, the data specified by DIP SW-2(IN 1/2) is out. In case of "Auto(up)" position, if the data comes on specified port by "1/2" switch, it is out. If no data comes at specified port, another port is selected and out automatically.

- example 1: DIP SW1-Man(down), SW2-A(up).

Auto B(IN2) -Off A(IN1) -On 1 2 Always, "IN1" is out (never changed to "IN2" even no data on "IN1")

- example 2: SW1-Man(on), SW2-IN2(off)

Auto B(IN2) -Off A(IN1) -On

1 2 Always, "IN2" is out (never changed to "IN1" even no input on "IN2") - example 3: SW1-Auto(off), SW2-IN1(on) B(IN2) -Off Data "IN1" is out as prior to "IN2". When no input on "IN1", "IN2" is Man ☐ A(IN1) -On selected automatically. - example 4: SW1-Auto(off), SW2-IN2(off) Auto \square B(IN2) -Off "IN2" is out as prior to "IN1". When no input on "IN2", "IN1" is Man A(IN1) -On selected automatically. 3) RS-422/232 Selection (SW7, SW8)

These are used for specifying output signal type such RS-422 and RS-232. SW7 and SW8 (on most front/rear side of PCB) are used for each OUT7 and OUT8 port.

If each SW is left position, then it become RS-422, and right position, then it become RS-232.

- Example

SW7 OUT7: RS-422

OUT8: RS-232. □ SW8

3. Specifications

- 1) Data Input
 - 2 NMEA ports (Auto/manual selectable)
 - Signal type: RS-422, RS-232, 5V TTL signal
 - Up to 115,200 bps support
 - Over voltage protection: up to 50V (1 minute)
- 2) Data Output
 - 8 NMEA (RS-422) ports
 - 2 ports support for both RS-422 and RS-232 signals.
 - Short protection and transient voltage suppression
- 3) Display (Left panel)
 - Power On: Red LED
 - Input A/B : Green LED
- 3) Input power
 - Used electronic fuse (0.3A), No replacing required
 - DC 24V (18V~32V), Max 5W
 - Reverse voltage protection
- 4) Weight: Appr. 1kg
- 5) Dimension:
 - 193 x 138.5
 - x 46.5mm

