

# ZNC-401 Universal NMEA Converter

## Introduction

The **Universal NMEA Converter, ZNC-401** converts various synchro, step, analog format signal into NMEA-0183 (IEC-61162-1) standard. This is very useful for interfacing most kinds of Gyrocompass, Anemometer, Speed Log, Rudder used in the worldwide with VDR (Voyage Data Recorder), AIS (Automatic Identification System), ECDIS (Electronic chart Display and Information System).

This ZNC-401 Universal NMEA Converter can accept variety analog signals such 1/36/90/360:1 synchro signal, 180:1 step signal, DC  $\pm 5/10V$  or DC4~20mA signal, pulse or dry contact signal. This is designed to consider accuracy and stability, and can be used for core part of Anemometer, Rudder and etc.

All information is displayed in large 8 char x 2 Line LCD and there are 8 level dimmer and contrast control.



## Applications and each specifications

### Gyrocompass application :

Synch Input	1:1 or 36:1 or 90:1 or 360:1 synchro signal. AC 26/11.8V ~ 115/90V, 50 ~ 400Hz.
Step Input	180:1 (6 step/1°) step signal. 25 ~ 70V.
Output data	Auto detection of common plus or common minus. \$HEHDT,359.9,T*hh<CR><LF>

### Anemometer application :

Angle Input	1:1 synchro signal.
Speed Input	$\pm 5/10V$ or 4~20mA or 1,710Hz at 60m/s.
Output data	\$WIMWV,359.9,R,60,M,A*hh<CR><LF> Port/starboard, m/sec, Knot, km/h selectable (Display & NMEA data).

### Rudder application :

Synch Input	1:1 synchro signal. Offset correction is available.
Rate	1:1 or 1:2 or 1:4 angle rate.
Output data	\$RARSA,45.0,A,,*hh<CR><LF>

### Speed Log application :

Pulse Input	200 pulse or 400 pulse at 1 nautical mile. 5~32V pulse or dry contact signal.
Output data	\$VDVBW,29.9,,A,,,*hh<CR><LF> or \$VDVHW,359.9,T,,,49.9,N,,*hh<CR><LF>

## Common Specifications

### Signal Input :

Analog	2 input ports, $\pm 5/10V$ or 4~20mA signal. 5~32V pulse or dry contact signal.
Pulse	Pulse and Analog input (Ch 2) use same terminal, selectable by jumper.

### Signal Output :

NMEA-0183	3 output ports (IEC61162-1, RS-422). 1 port is changeable to RS-232. 4800, 9600, 19200, 38400 bps transmission speed. 1/sec or 10/sec transmission rate.
Voltage/Current	2 output ports, $\pm 5/10V$ or 4~20mA selectable (Optional D/A board required)

### Display :

ZNC-401L	8 characters x 2 lines large LCD, 8 level dimmer & contrast adjustable.
ZNC-401F	4 digits 7segments display, 8 level dimmer adjustable.

### Power :

Input Voltage	DC 18~32V, Appr. 200 mA.
Fuse	Electronic fuse, no replace required.

### Physical specifications :

Size	176 x 63 x 210 mm (See right drawing).
Weight	Appr. 1.4kg.
Terminal	Screw-less terminal blocks

### Option :

Other signals	In case of any other NMEA signal or non standard specifications, please contact us.
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\* This specifications may be changed without any notification.

