

ZAD-120

12ch, 24bit Analog to NMEA Converter

Introduction

ZAD-120 12ch, 24bit Analog to NMEA Converter is useful for converting from the voltage & currents to digital signal which is used in the marine industry.



This NMEA Converter is high-precision 24bit A/D converter with the digital filter for excellent noise rejection, also it was designed for consider high accuracy and high reliable.

ZAD-120 outputs data through NMEA 0183 and TCP/IP-UDP (Ethernet) protocols simultaneously hence this is very useful instrument for interfacing with various ships equipment such ECDIS, VDR, RADAR.

Features

1. High precision 24bit A/D Converter with Digital filter for excellent noise rejection.
2. Various input signals ranges for industry standard (0V~5V, $\pm 5V$, 0V~10V, $\pm 10V$, 4~20mA).
3. No input signal loss caused by very high input impedance circuits (More than 500kohm).
4. Supports both Single ended and Different type input signal.
5. Very High Common mode noise rejection (Large than DC 100V).
6. Outputs a NMEA 0183 standard (XDR) and UDP (TCP/IP) datagram through 100BaseT Ethernet.
7. Supports IEC 61162-450 mode (Optional).

Specifications

Inputs

Analog Input	- 12 NMEA 0183 Input Ports
Input Signal	- Voltage : -10~10V DC (Absolute Max Input : DC 100V)
	- Current : 4~20mA DC (Absolute Max Input : DC 30mA / 7.5A)
	- Selectable by Jumper
Input Impedance	- 500kohm / 250ohm

Signal Type

Differential Signal	- Ch1~Ch8 only, Common Mode Voltage 100V
Single Ended Signal	- All Channels (Ch1~Ch8 Single/Differential Selectable)

Digital Output

Resolution Voltage	- 0.1V or 0.01V
Resolution Current	- 0.1 mA or 0.01mA
NMEA 0183 Output	- RS422 Port, "XDR" Sentence, 4,800~38,400bps UDP (TCP/IP)
Output	- 100 BaseT Ethernet (NMEA 0183 Sentence)
Output Data Rate	- 1Hz or 10Hz
Analog to Digital Conversion	
Precision / Accuracy	- 24 bit / $\pm 0.5\%$ at Full Scale
Digital Filter	- Average 32 Times
Display	
LED	- 1 Red LED On : Power On - 4 Green LEDs : Off / On
D/R (Data Output Rate)	- Output Rate, 1Hz or 10Hz
Resolution	- 1st Decimal Place or 2nd Decimal Place
LWE	- Normal or LWE (Light Weight Ethernet - IEC 61162-450)
Mode	- Normal Operating or System Mode
Input Power	
Voltage	- DC 24V (DC 18~32V)
Dissipation	- Approximately Maximum 0.2A at 24V
Operation Environment	
Temperature/Humidity	- $-15^{\circ}\text{C}\sim+55^{\circ}\text{C}$ / 95% ($-59^{\circ}\text{F}\sim 131^{\circ}\text{F}$ / 95%)
Physical specifications	
Dimension/Weight	- 180 x 201 x 60 mm / 1.0 kg (7.1 x 8.0 x 2.4 in / 2.2 lb)
Terminal	- Screw Removal Terminal Blocks

■ Remark

- 1) In case of other specifications (NMEA Signal or non-standard signal), please contact us.
- 2) This specification may be changed without notification.