

NAVITRON SYSTEMS LTD

NT921HDI & NT922HDI Heading Data Interfaces

The NT921HDI is available in two forms to convert Sin/Cos Heading signals received from proprietary compasses / fluxgate devices etc. to standard NMEA heading data. The resultant serial data accords with IEC 61162/1 and IEC 61162/2 (as preferred) and can be used as a heading input to a Navitron Autopilot System or for inputs to other proprietary equipment such as radar (stabilisation) or ECDIS etc.

Type NT921HDI

Input Signal:- Sin / Cosine
(0 - 5Vdc range)



Output Signal:-

Single channel NMEA 0183 Heading Data. Installation Selectable 4800 / 38400 baud with 1Hz, 10Hz or 20Hz update rate combinations.

Type NT921HDI/1:-

This is the simpler form of interface which can be connected within a Navitron Autopilot System and uses the regulated power supplies available from the Autopilot Control Unit as it's power source.

The PIC processor intelligent NT921HDI then decodes applied Sin/Cos Heading signal and converts the input signal to NMEA 0183 serial output data which is installation selectable for 4800 or 38400 baud and update rates of 1Hz or 10Hz as required.

NT921HDI/2:-

This is a stand alone version of the Sin/Cos to NMEA converter and is suitable for direct connection to 11-40Vdc vessel power supply since voltage regulation is included in the NT921HDI/2 (Type 2)

The single channel NMEA 0183 Heading data output signal is opto isolated to eradicate common mode problems and provides installation selectable update rates of 1Hz, 10Hz or 20Hz dependent upon the output baud rate selected (4800 or 38400).

Type NT922HDI

Input Signal:- NMEA 0183 Heading data @ 4800, 9600, 19200 and 38400 baud



Output Signal:-

Installation selectable 3, 6, 12 and 24 steps/degree (5Vp/p) & isolated dual channel NMEA Heading data @ 4800, 9600, 19200 or 38400 baud with update rate combinations 1, 8, 10, 20 & 40Hz

NT922HDI:-

The NT922HDI provides conversion functions from NMEA Heading data to 5Vp/p Step by Step and from single channel NMEA Heading data to dual channel opto isolated NMEA outputs which are independently selectable to provide both baud rate and update rate conversions.

Suitable for stand alone 11-40Vdc power supply operation, the NT922HDI can be used in buffered NMEA to step repeater applications etc. and the baud rate conversion function provides a simple solution to many interfacing requirements involving equipment from different systems operating at different baud rates.

The NT922HDI NMEA serial data outputs are available in two sentence types (\$XXHDT or \$XXHDG) which are derived and reliant upon the input data received.

The outputs (opto isolated) can be connected to external "listeners" in RS422, RS232 and standard NMEA connection formats.



NAVITRON SYSTEMS LTD

NAVITRON SYSTEMS LTD (Registered in England No. 2607869)
17 The Tanneries, Brockhampton Lane, Havant, Hampshire PO9 1JB
TEL: (UK) 023 9249 8740 FAX: (UK) 023 9249 8783
(INT) +44 23 9249 8740 (INT) +44 23 9249 8783
E-mail: sales@navitron.co.uk Web: www.navitron.co.uk

NT921HDI / NT922 HDI

Outline Specifications

NT921 HDI /1 & NT921 HDI /2 Tech Specs

NT921 HDI /1 Inputs:-		
Supply Voltage	Nom. 12V reg from Autopilot	
Power Consumption (Excluding Compass)	1.0W	
Sin/Cos Sig/Ref Levels		
Sin Sig Volts	0-5Vdc	
Cos Sig Volts	0-5Vdc	
Sin/Cos Ref	2.5Vdc	
NT921 HDI /1 Outputs:-		
Proprietary Compass Supply		
Voltage	Nom. 12V reg	
Max Current	100mA	
NMEA 0183 Heading Data		
Sentence Type	Baud Rates	Update Rates
\$XXHDG	4800	1Hz, 10Hz
	38400	1Hz, 10Hz, 20Hz
Operating Temp Range		0 - 60°C
Compass Safe Distance		0.4m
Mechanical Data		
Length	145mm	
Height	45mm	
Width	95mm	
Weight	0.5kg	

NT921 HDI /2 Inputs:-		
Supply Voltage	11-40Vdc	
Power Consumption	1.0W	
Sin/Cos Sig/Ref Levels		
Sin Sig Volts	±5V or ±12V	
Cos Sig Volts	±5V or ±12V	
Sin/Cos Ref	2.5Vdc	
NT921 HDI /2 Outputs:-		
Proprietary Compass Supply		
Voltage	12Vdc	
Max Current	20mA	
NMEA 0183 Heading Data		
Sentence Type	Baud Rates	Update Rates
\$XXHDG	4800	1Hz, 10Hz
	38400	1Hz, 10Hz, 20Hz
Operating Temp Range		0 - 60°C
Compass Safe Distance		0.4m
Mechanical Data		
Length	145mm	
Height	45mm	
Width	95mm	
Weight	0.5kg	

NT922 HDI Tech Specs

NT922 HDI Inputs:-		
Supply Voltage	11-40Vdc	
Power Consumption	1.0W	
NMEA 0183 Heading Data		
\$XXHDT	All sentences acceptable at 4800, 9600, 19200, 38400 bd	
\$XXHDM		
\$XXHCC		
\$XXHDX		
NT922 HDI Outputs:-		
NMEA 0183 Heading Data		
Ch1 & Ch2 Sentence Types	\$XXHDT \$XXHDX	
Baud Rates	Independently Selectable @ 4800, 9600, 19200 & 38400 baud	
Update Rates	Independently Selectable @ 1, 8, 10, 20, 40Hz combinations	
Step by Step		
Step Voltage Level	+5Vdc	
Step Output Rate (selectable)	3, 6, 12 & 24 steps/degree	
Z out	330 Ω	
Operating Temp Range		0 - 60°C
Compass Safe Distance		0.4m
Mechanical Data		
Length	145mm	
Height	45mm	
Width	95mm	
Weight	0.5kg	