



CATALOG

NINGLU

NINGLU TECHNOLOGY

RAIS
BNWAS
Repeaters
Fish Finder
Inclinometer
Anemometer
Echo Sounder
Weather Station
Doppler Speedlog
Simulator & Tester



About Ninglu	1
NEW! Rudder Angle Indication System AD80	2
Navigational Echo Sounders	3
10 inch LCD sounder DS2008 (CCS APPROVED)	3
7 inch sounder DS207 (CCS APPROVED)	4
Other sounders options for inland river navigation	5
Doppler Speed log DS99	6
Anemometer AM706	7
Weather Station AM706D	9
Electronic Inclinometer IM330	10
Fish Finders.....	11
7 inch Dual-frequency Fish Finders FS117.....	11
10 inch Fish Finders.....	12
15 inch Fish Finders.....	13
Bridge Navigational Watch Alarm System BW508.....	14
Repeaters / Slaves	15
5 Channels Repeater NM501	15
Digital Gyro Repeater IR361	16
Wind Repeater IR761	16
Weather Repeater IR762	17
Steering Repeater SR362	17
Transducers & Tanks	18
Tester / Simulators	19
SIM990	19
SIM996	20
SIM999	21
NMEA0183 Tester SIM183	22
Accessories	23
1 to 8 NMEA0183 distributor/ buffer NMEA9108/NMEA918	23
2 to 14 NMEA0183 distributor / buffer NMEA917	23
DC12V TO DC24V Adaptor DD924	23
Remote Dimming Control DIM930.....	23

About Ninglu

Nanjing Ninglu Technology Co., Ltd. is a Sino-Norway SKIPPER joint venture enterprise, established in 2000. Today it has become one of Chinese leading providers of navigational electronics for vessels, supplying a wide range of Rudder Angle Indication System, Echo Sounder, Speed Log, Anemometer, BNWAS, NMEA Distributor, repeaters etc.

Nanjing Ninglu Technology has been ISO9001 Quality System approved since 2002, toady, 95% of all products are designed and produced by Ninglu.

Focusing on quality for over 20 years, Ninglu's award-winning production, training, warehouse, office and development facility are based in same location in Nanjing, China.



Intellectual property management System



New High-tech Enterprise



ISO Certificate

Susan Wang

Overseas Sales Manager

Mobile: + 86-15094319396

Skype: susan.wang.chn

Tel: +86-25-52616325 ext. 8820

Fax: +86-25-52614640

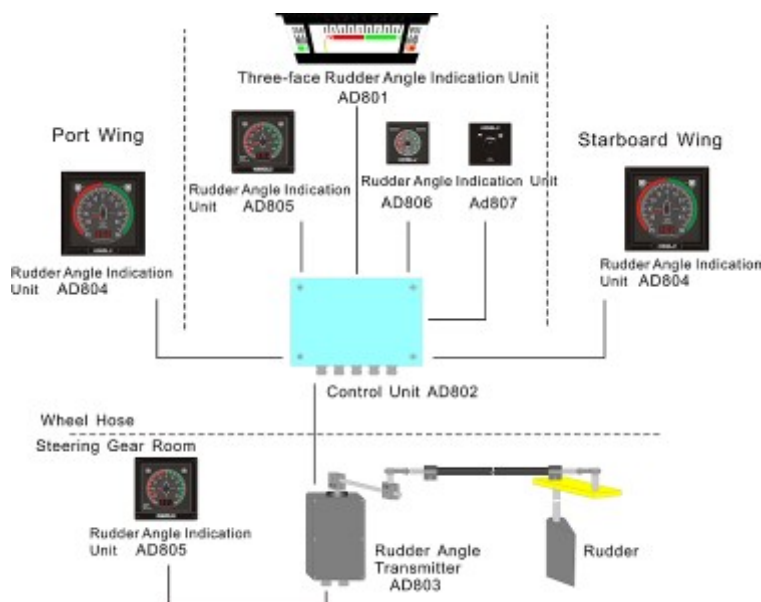
Web: www.sounder.com.cn

Email: export@sounder.com.cn

NEW! Rudder Angle Indication System AD80

MED / CCS APPROVAL

Rudder angle indication system AD80 is used to accurately and real timely indicate the direction and position of the rudder in wheel house, ECC room and steering gear room for the crew. With the functions of flexible configuration, good dimming, easy to install and maintain, AD80 fully complies with the regulations of IMO and the standard IEC61162 sentences. It is one kind of very important equipment for steering and can be widely used in various passenger and cargo vessels.



ITEM	SPECIFICATIONS
Rudder Angle accuracy	$\pm 0.1^\circ$
Supply Power	24V DC (21.6-31.2V) 110/220V 50/60Hz AC
Data Input/Output	RS422, NMEA0183 Standard \$--RSA, x.x, A, x.x, A*hh<CR><LF>
Mounting	Desk/Ceiling/Flush

DIMENSION PROTECTION LEVEL
Three-face Indication Unit AD801 $\phi 370\text{mm}$, High 156mm IP22
Control Unit AD802 300mm $\times$ 225mm $\times$ 125mm IP22
Transmitter AD803 270mm $\times$ 120mm $\times$ 80mm IP56
Indication Unit AD804 192mm $\times$ 192mm $\times$ 192mm IP56
Indication Unit AD805 144mm $\times$ 144mm $\times$ 73mm IP22
Indication Unit AD806 96mm $\times$ 96mm $\times$ 85mm IP22
Remote Dimmer AD807 96mm $\times$ 96mm $\times$ 64mm IP22

Navigational Echo Sounders

10 inch LCD sounder DS2008 (CCS APPROVED)

Ninglu DS2008, echo sounder with a 10.4 inch, high resolution graphic LCD, continuously shows echo graphics on the LCD along with complete navigational details.

External connectors are provided for printer, and NMEA in/output.

DS2008 contains history memory that stores depth, time and other available navigation data continuously for the preceding 20 hours.



FEATURES

- ★ 10.4 inch color TFT LCD
- ★ 50 kHz / 200 kHz transducer
- ★ 20 hours history data record
- ★ NMEA0183 Depth data output and print out
- ★ **Compatible with Furuno/ JRC transducers**

DEPTH RANGE: 0.4m ~ 800m

FREQUENCY: 200 kHz or 50 kHz

CCS APPROVED

ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Display	10.4" color LCD with adjustable backlight	Auto Range	Yes
Pixel Number	640×480	Alarm	Shallow water, Power drop
Power Supply	DC24V (18~33V)	Power Alarm	Power lost alarm
Dimension	264(H)×270(W)×93(D)mm	Alarm Media	Buzzer, Flashing
Model	DS2008: 200kHz only × 1 channel	Time Scale	30s interval time bar on LCD
	DS2008: 50kHz only × 1 channel	Picture Speed	6 steps plus freeze
	DS2008H: 200kHz × 2 channels	NMEA Outputs	NMEA0183 (DPT)
	DS2008S: 50&200kHz, 2 channels	NMEA Input	GPS Position (GGA)
Power Output	DS2008 & DS2028: 500W	Echo color	7 colors
	DS2020: 300W	Language	English, Chinese
Mounting Dimensions	261 × 247 mm	Protection	Display IP23(IEC60945)
		Mounting	Desk/Ceiling/Flush
Depth Range	0.4m to 800m	Options	Depth repeater IR261
Accuracy	Error less ±1.0% of range		Printer DPU-414
History Storing	20 hours history data	Classification	Made to IMO performance standard

Navigational Echo Sounders

7 inch sounder DS207 (CCS APPROVED)

DS207 is one of the most sold echo sounders used in inland river. The echo sounder graphics is continuously shown on 7 inch LCD along with complete navigational details.

2-channels realizes observation of depth detected from different locations of ship. Information from both of two transducers can be displayed simultaneously. Gain of the 2 channels can be set separately.



FEATURES

- ★ 7 inch color TFT LCD
- ★ NMEA0183 data output
- ★ Shallow depth auto alarm
- ★ Multi-installation modes

CCS APPROVED

DEPTH RANGE: 0.3m ~200m

FREQUENCY: 200 kHz & 200 kHz

CHANNEL: Dual-channels

CCS APPROVED

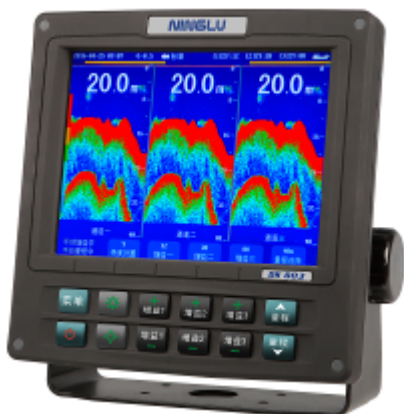
ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Display	7 inch color TFT LCD	Picture Speed	Stop, 1/16, 1/8, 1/4, 1/2, 1/1, 2/1, 4/1
Night Mode	Black background & Hue for night	Time Scale	On screen 30s per second
Pixel Number	480×234 pixel	Signal Levels	8 colors signal levels
Power Supply	DC24V (18~33V), 20W	Consumption	<20W
Dimension	268(H)×225(W)×106(D)mm	Alarm Types	Shallow
Unit Weight	1.25kg	Alarm Beeper	Buzzer(optional), flashing
Frequency	DS207: 200kHz × 2 channels	Depth Output	NMEA0183 (DBT,DPT)
Depth Range	2.5m - 200m	Protection	Over voltage/ current, Polarity
Auto Range	Yes	Mounting	Desk/Ceiling/Flush
Ping Rate	Max 10 pings per second	Temperature	0~50℃, IEC 60945
Output Power	300W	Options	Depth Repeater IR261

Navigational Echo Sounders

Other sounders options for inland river navigation

DS803

- ★3 channels navigation echo sounder
- ★10.4 inch TFT LCD
- ★50 or 200kHz
- ★400W or 600W



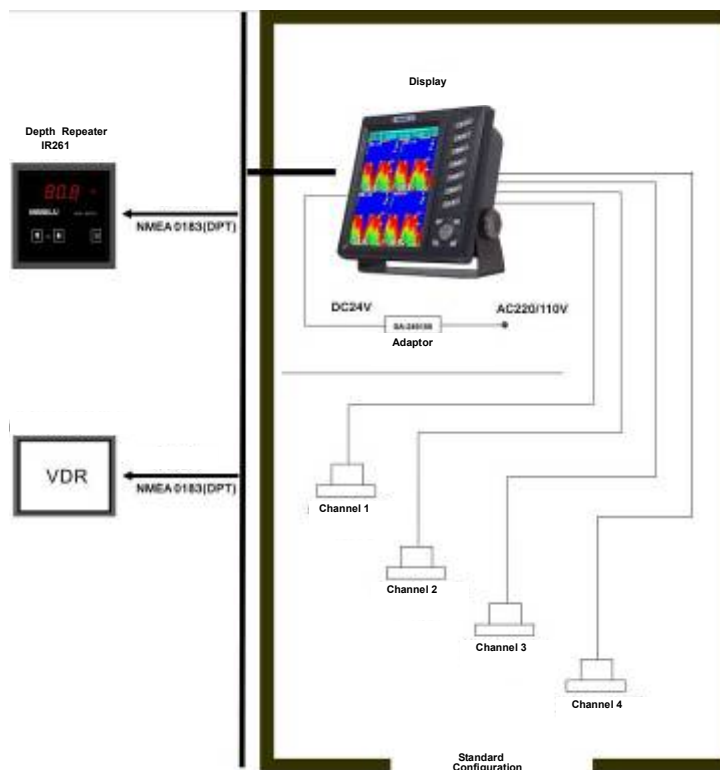
DS2022

- ★2 channels navigation echo sounder
- ★10.4 inch TFT LCD
- ★50 or 200k
- ★400W or 600W



DS2040

- ★4 channels navigation echo sounder
- ★10.4 inch TFT LCD
- ★50kHz or 200kHz
- ★400W or 600W



Doppler Speed log DS99

Ninglu DS99 is a single axis Doppler Speed Log, displaying ship's speed relative to water in one axis(STW, Fore/ Aft) and distance (Trip/ Total) in 7 inch TFT LCD, using Doppler principle.

Applying new technology of high integration and stability, DS99 provides you the optimum choice for large ship under 50000 GT. Its rugged and modern design offers excellent user feelings.



CCS APPROVED

ITEM	SPECIFICATIONS
Display LCD	7 inch TFT, 480×234 pixel
Power Supply	DC24V (18~33V), 20W
STW Speed	Arrow + Digital Speed Display
Data Output	IEC 61162-1 VBW, VLW
Language	English / Chinese
Trip Counter	Measurement from 0 to 9999.99 NM
Total Counter	Measurement from 0 to 999999.99 NM
Distance Accuracy	0.2NM or 2%, whichever is greater
Speed Accuracy	0.2kn or 2%, whichever is greater
Speed Range	-10 ~ +40 knots
Power Supply	AC110/220V 50/60Hz
Classification	IMO
Input	GPS Input VTG
Output	VBW and VLW



Anemometer AM706

Marine Anemometer AM706 is a combined instrument for wind speed and wind direction.

Ninglu provides various wind displays and wind sensors to satisfy your different requests.

Two different displays are optional.

Display options

Model	Wind display AM706E	Wind display AM706C
		
Display	7" TFT / 480 × 234 pixels	Nixie tube
Power Supply	DC24V (18~33V)	DC24V (18~33V)
Date Input/Output	NMEA0183	NMEA0183
Proof	IP23	IP23
Brightness	9 level adjustable	6 level adjustable
Functions	Real-time Wind speed & direction With inputting GPS (RMC) data, user can choose heading, true wind, or gust mode.	Real-time Wind speed & direction 2-level wind speed alarm <u>AM706C (with alarm function), designed in compliance with the ExxonMobil MESQAC rules E.19, is mainly used for tankers</u> Connect with printer to print out wind speed and direction



Alarm in CCR
Optional



Alarm in deck IP56
Optional



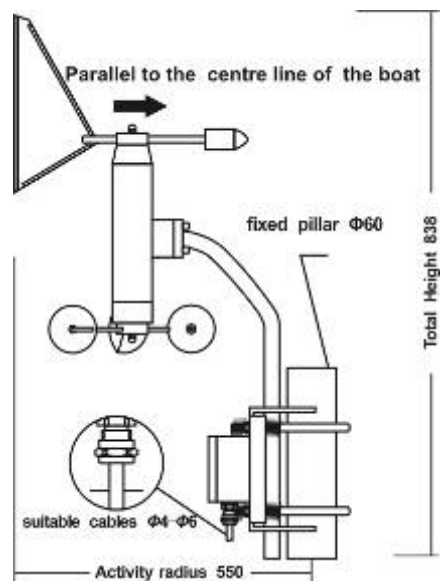
Wind repeater IR761
Optional
Refer to page 15
for more details

Printer DPU-414
Optional

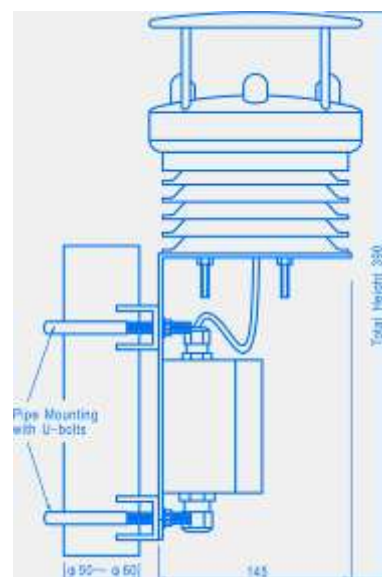
Sensor options



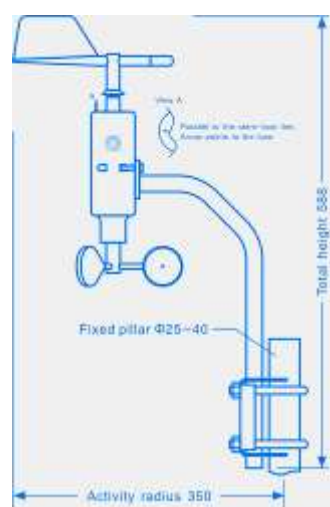
Marine wind sensor
Model: AM706S
Type: Mechanical
Material: Stainless Steel
Proof: IP56
Startup wind speed: $\leq 1.2\text{m/s}$



Marine wind sensor
Model: AM706W
Type: Ultrasonic
Material: Plastic
Proof: IP56
Startup wind speed: $\leq 0.1\text{m/s}$



Inland river wind sensor
Model: AM706H
Type: Mechanical
Material: Plastic
Proof: IP56



Weather Station AM706D

The marine weather station AM706D is a multi-functional measuring instrument.

It can accurately measure and display real-time relative wind speed and direction, true wind speed and direction (with GPS input), air temperature, relative humidity and barometric pressure.

In addition, it can print these parameters of time, longitude and latitude, ship speed, and navigational signal. It is important and necessary for observation and safe navigation.



Display AM706D IP23

FEATURES

- ★ 10.4 inch color TFT LCD
- ★ Relative/True wind direction & speed
- ★ temperature, humidity and air pressure
- ★ Alarm of wind speed/temperature/humidity
- ★ Data print out with printer DUP-414 (optional)



Wind Sensor
AM706S
IP56



Sensor of
Temperature
& Humidity
AM706TH
IP54

ITEM	SPECIFICATIONS
Display	10.4 inch color TFT LCD
Power Supply	DC24V (18~33V)
Wind direction range:	0~360°
Wind direction accuracy:	±1°
Wind speed range	1.2~25m/s
Wind speed accuracy	±5% (min 0.1m/s)
Min start speed	≤1.2m/s
Temperature range	-20~+80°C
Temperature accuracy	±0.5°C
Humidity range	0~100%RH
Humidity accuracy	±4.5%RH
barometric pressure range	500~1100hPa
barometric pressure accuracy	±4hPa

Electronic Inclinometer IM330

Electronic inclinometer IM330 is a device to measure ship hull posture, including roll actual angle, roll period, roll amplitude, pitch actual angle, pitch period, pitch amplitude, date, time, longitude and latitude, and send them to VDR. It also has alarm function for ship's officers to avoid dangerous situations and the alarm messages (date, time, longitude, latitude, roll angel and pitch angel) are recorded in the history for check.



Display IP23

FEATURES

- ★ 10.4 inch color TFT LCD
- ★ Pitch/ Roll/Power failure alarm

SENSOR FEATURES

- ★ two-dimension angle measure
- ★ Resolution 0.01°



Sensor IP67

ITEM	SPECIFICATIONS
Dimension	H264 x W270 x D93 mm
LCD	10.4 inch TFT color LCD, 640X480 pixels
Power Supply	Two channels, DC 18.0V~31.2V, (24V, -25%~+30%) AC 220/110V (50/60Hz), with AC adapter
Alarm Type	Roll Alarm, Pitch Alarm and Power Failure Alarm
Alarm	Flashing and Buzzer (press any key to cancel alarm)
History Storage	20 items×407pages
Output/ Input	NMEA 0183
Input Baud Rate	4800bps
Output Baud Rate	4800bps
Roll / Pitch angle range	-90°~+90°
Roll / Pitch angle accuracy	±0.1°
Roll / Pitch amplitude range	0°~+90°
Roll / Pitch amplitude accuracy	±1°
Roll / Pitch period range	4~40s
Roll / Pitch period accuracy	1s
Working TMP	-15°C~+55°C
Waterproof	IP23 (main unit) and IP 67 (inclination sensor)
Weight	3.7kg

Fish Finders

7 inch Dual-frequency Fish Finders FS117

FS117 7 inch LCD fish finder is of high sensitivity and advanced detecting software which can display the water bottom landform, depth and figures accurately.

Gain value of two frequency adjusted separately is suitable for different signal intensity.

Easy observation with bottom zoom & layer zoom function



50k Hz & 200k Hz

Item	Specification	Item	Specification
Display	7 inch TFT, 480×234 pixel	Zoom	Bottom Zoom & Layer Zoom
Frequency	Dual-frequency 50&200kHz	Zoom rate	off、×2、×4
Range	280m	Power supply	DC24V (18~33V)
Echo level	8 and 12 color levels	Temperature	0~50℃,
Alarm types	Fish alarm (2m above)	Water proof	P23
Output power	400W	Time scale	On screen 30s time scale
Depth Unit	Meter, Fathom	Measurement	188(W)164(H)65(D)mm
PIC	0、1/4、1/2、1/1、2/1、4/1	Installation	Table/Ceiling/Flush

Menu

AUTO_Range	OFF, ON
TVG	OFF, LOW, HIGH
NOISE REJECTION	OFF, LOW, HIGH
BOTTOM_LOCK ZOOM	OFF, ×2, ×4 (useless in 50&200 kHz common mode or Layer zoom)
LAYER ZOOM	OFF, 1/2, 2/2, 1/4, 2/4, 3/4, 4/4
FISH ALARM	OFF, ON
SIGNAL DELETE	Cancel 0~5 of 8 colors, Cancel 0~7 of 12 colors,
COLORS	8, 12
SHALLOW ALARM	OFF, 0.8~10.0m
BUZZER	OFF, ON
UNIT	m (Meter), fm (Fathom)
PUSH [OK] EXIT	Save all data and exit menu.

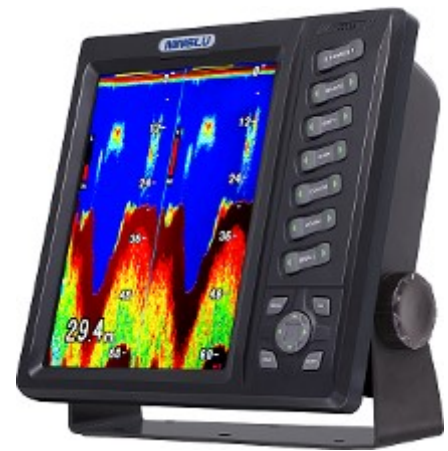
Fish Finders

10 inch Fish Finders

New 10 inch fish finder DF series bring users the power of low noise digital filter. With its smart new shape and excellent performance, plus the high sensitivity and 1-3KW power USA AIRMAR transducers, ensures you satisfied fishing result.

Gain value and weak color deletion functions make fish finder suitable for different water conditions.

Easily control your fish on screen in magnifying fish echo mode.



**FROM 600W
UP TO 3KW**



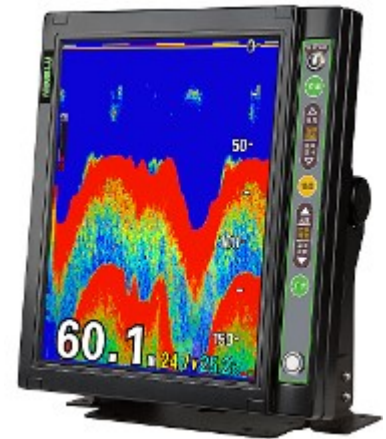
USA AIRMAR Transducer: 50kHz-2000W & 200kHz-1000W

ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Dimension	H264×W270×D93 mm	Auto Range	Off On
Power	DC24V (18~33V)	Max A-Range	30m 100m 200m 300m 500m 800m Max
Consumption	18W	Zoom	×2.5 ×5 ×10
Frequency	50kHz, 200kHz or 50&200kHz	Unit	m fm
Output power	From 600W up to 3KW	Noise Rejection	Off Low High
<i>We can customize frequencies and output power as per customers' requests.</i>		TVG	Off Low Standard High
Depth range	5~2000m	White Line	Off On
Max Shift range	505 ~ 2500m	Back Ground	30s
Pic Speed	0 1 2 3 4 ×2 ×4	Palette	6 patterns
Alarm Type	Fish Alarm/ Depth Alarm		

15 inch Fish Finders

FEATURES

- ★15 inch crystal clear precision display with color LVDS
- ★Auto gain functions allow easy operation even for beginner
- ★Compact design allows easy installation
- ★Digital processing achieves the high sensitivity and effective noise reduction.



**FROM 600W
UP TO 3KW**

ITEM	SPECIFICATIONS
Display	15 inch color TFT LCD, 1024X768 pixels
Power supply	DC24V (18~33V) , <30W
Working frequency Output power	Various frequency and output power for your options. 50kHz-2000W&200kHz-1000W <i>We can customize frequencies and output power as per customers' Requests.</i>
Depth range	0~2000m
Gain	Auto Gain, 0~40
PIC speed	stop, 1, 2, 3, 4, ×2, ×3
Zoom rate	×2, ×4, ×8
Background color	4 optional color (Black, Dark-blue, Blue, White)
Alarm	Fish/Depth/Water temperature
Dimension	384×316×203(H×W×D mm)
Weight	Display unit about 8.2 KG
Working environment	-10~40℃, (IEC60945), 10~90% relative humidity
Proof	Display IP23, Transducer IP65

Bridge Navigational Watch Alarm System BW508

BNWAS BW508 is to monitor the awareness of the Officer of the Watch (OOW) and automatically alerts the Master or another qualified OOW if for any reason the OOW becomes incapable of performing the OOW's duties.

Additionally, BW508 also provide the OOW or other equipment with a means of emergency calling for immediate assistance.



CCS APPROVED

FEATURES

- ★ Easy installation, simple operation and high quality
- ★ Complies with performance standard IEC 62616
- ★ With emergency call and emergency transfer function
- ★ Support NMEA0183 data input/output



1st Stage Alarm (IP65)

Installation Location: bridge wings

2nd Stage Alarm (IP20)

Installation Location: officer's cabin area



3rd Stage Alarm (IP20)

Installation Location: officer's corridor

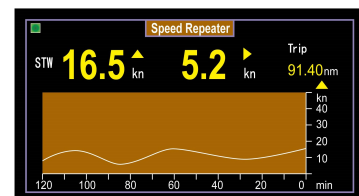
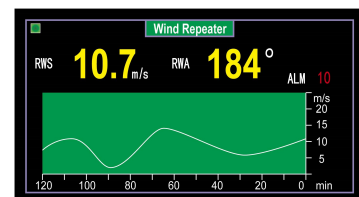
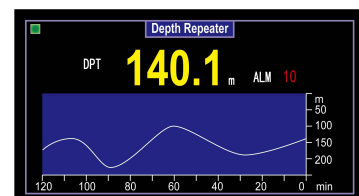
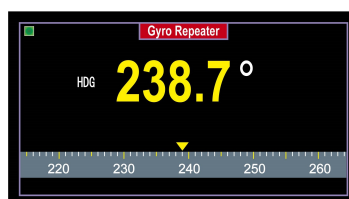
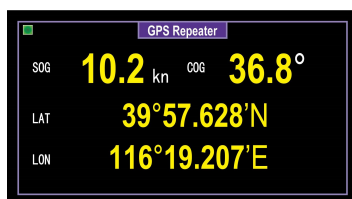
Repeaters / Slaves

5 Channels Repeater NM501

NM501, 7 inch navigation monitor, displays depth, wind, gyro, speed log and GPS navigation messages on one screen. Its rugged and handsome design offers excellent user feelings. Remote controller is available for ceiling installation.

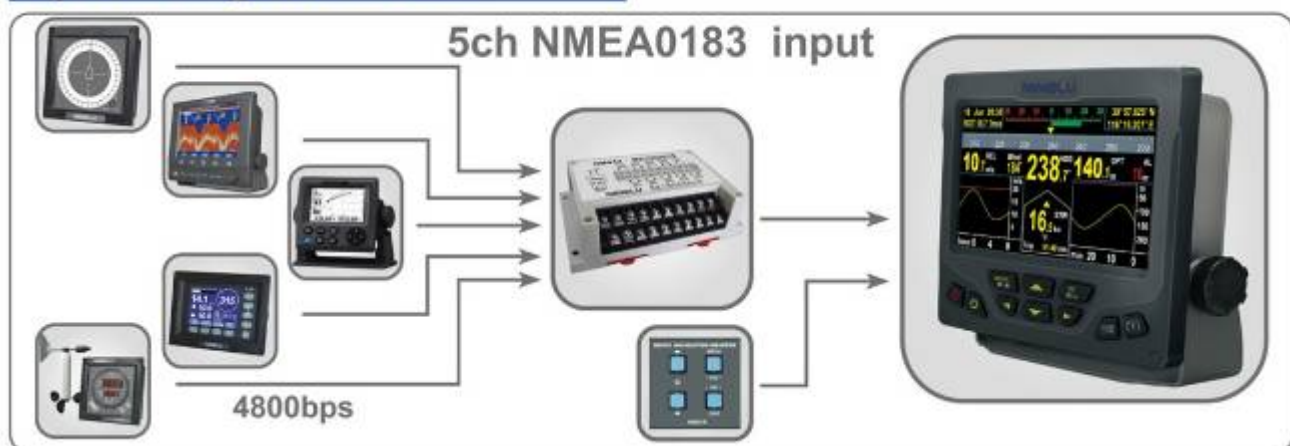
FEATURES

- ★ 5 channels repeater, only one cable is needed (Gyro/Sounder/Anemometer/Speed log/GPS repeaters)
- ★ 5 repeaters in 1 mode and single repeater mode



- ★ NMEA0183 data input
- ★ In one window mode, historical data analog display
- ★ Wind/Depth alarm, Speed/Distance unit selectable
- ★ Data receiving indicators, LCD backlight set
- ★ Remote keyboard, easy control for ceiling mount

System Diagram ※ 系统图



Repeaters

Digital Gyro Repeater IR361

IR361 is a digital gyro repeater that displays the heading angle in the LED segment display and indicates the rate of turn (ROT) with 30 dual-color surrounding LEDs. The IR361 will display heading angle given by the HDT message from a gyro or other equipment (NMEA 0183) and indicate ROT by calculating change in heading based on the HDT input and the time between each message.



ITEM	SPECIFICATIONS
Measurement	L220mm×W170mm×H63mm
Power supply	18VDC to DC33VDC
Display	1 line with 7 segments 30 × 20 mm
Cut-out dimensions	124x124 mm. Bracket or panel mounting
Consumption	DC24V (18~33V)
Inputs	NMEA0183 protocols Sentence: \$--HDT,x.x,T*hh<CR><LF>

Wind Repeater IR761

The IR761 wind repeater is a combined display for wind speed and direction.

It receives NMEA0183 signal from a marine anemometer (talker), and displays the **wind speed** and **max wind speed** on digit LED, **wind direction** on a double LED circle. Its 144x144 Din size cabinet is suitable for panel (flush) mounting. Also the tabletop and wall mounting is available with the bracket.



ITEM	SPECIFICATIONS
Function	Wind Display
Measurement	L144mm×W144mm×H62mm
Weight	1.4kg
Power & Voltage	18VDC to DC33VDC
Consumption	DC24V (18~33V)
Inputs	NMEA0183 protocols \$--MWV,123,R,5.8,N,A*-- Wind speed in knots \$--MWV,123,R,5.8,M,A*-- Wind speed in m/s

Repeaters

Weather Repeater IR762

The IR762 weather repeater is a combined 7" LCD display for relative wind speed and direction, temperature, relative humidity, barometric information.



ITEM	SPECIFICATIONS
Display LCD	7" TFT LCD / 480 × 234 pixels
Measurement	188W 164H 65D mm
Weight	1.4kg
Power & Voltage	DC24V (18~33V)
Consumption	2W (24V)
Inputs	NMEA0183 Wind: MWV Weather: MDA Humidity: MHU Barometer: MMB Temperature: MTA

Steering Repeater SR362



Steering repeater SR362 ensures a clear indication of the heading information by using a 360° compass card. Brightness is adjusted on the front panel, via NMEA or from the optional remote controller, DIM930. Multiple installation methods facilitate observation in different positions.

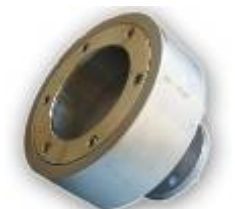
ITEM	SPECIFICATIONS
Function	Wind Display
Measurement	218 (L) × 202(W) × 64(H) mm
Weight	2.2kg
Power & Voltage	18VDC to DC33VDC
Indication range	0 ~ 359°
Reading accuracy	± 1°
Inputs	NMEA0183 protocols Sentence: \$--HDT,x.x,T*hh<CR><LF>

Transducers & Tanks

Transducers					
Model	Frequency	Output power	Channel	Cable Length	Outer Shell
NGM100-200-15L	200kHz	600W	1	15m	Rubber
NGM100-200-25L	200kHz	600W	1	25m	Rubber
BP60-200-15L	200kHz	600W	1	15m	Bronze
BP60-50-15L	200kHz	600W	1	15m	Bronze
NTB52-200-10L	200kHz	400W	1	10m	Bronze
TGM60-50-15L	50kHz	600W	1	15m	Rubber
TGM60-50B-10L	50kHz	1200W	1	10m	Rubber
TGM50/200B-15L	50kHz-600W & 200kHz-600W		2	15m	Rubber
CM488	50kHz-2000W & 200kHz-1000W		2	15m	Rubber
CM158	50kHz	2500W	1	10m	Rubber
CM422	50kHz-1500W & 200kHz-1500W		1	10m	Rubber



Tanks			
Model	Diameter	Material	Transducer
NGM100-200DLZ	Φ216mm	Steel	NGM100-200-15L NGM100-200-25L
TGM60-50DLZ	Φ216mm	Steel	TGM transducer With different bottom parts
BP60-50DLZ	Φ120mm	Steel	BP60-50-15L
BP60-200DLZ	Φ128mm	Steel	BP60-200-15L
NTB52-200DLZ	Φ118mm	Steel	NTB52-200-10L



Tester / Simulators

SIM990

SIM990 is portable (hand-held) combo-tester of bottom echo simulator as well as impedance tester of transducer. SIM990 will be your helpful assistant for service on board.

Echo sounder Simulator



PARAMETERS	RANGE	RESOLUTION	ACCURACY
Input Freq	10kHz~999.9kHz	0.1kHz	±0.1kHz
Input Width	20us~60000us	1us	±1us
Input Period	1ms~6553.5ms	0.1ms	±0.1ms
Input amplitude	50V~2500V	N/A	N/A
Output Freq	10kHz~999.9kHz	0.01kHz	±0.1kHz
Output Bottom Width	20us~60000us	1us	±1us
Output Bottom Depth	0.075m~4915.125m	0.075m	±0.1m
Output Fish Width	20us~60000us	1us	±1us
Output Fish Depth	0.075m~4915.125m	1us	±1us
Output Amplitude	0.02mV~599.99Mv	0.01mV	±0.01mV
Output Fish Ratio	00:00~99:99	N/A	N/A

Transducer Tester

ITEM	RANGE	RESOLUTION	ACCURACY
Scan Freq	10kHz~999.9kHz	0.01kHz	±0.1kHz
Resonant Freq	10kHz~999.9kHz	0.01kHz	±0.1kHz
Resonant Resistance Of The Transducer	1ohm~65535ohm	1ohm	±1ohm
Resonant phase of the transducer freq	0~3.14	0.01	±0.01
Resistance of the transducer at a particular	1ohm~65535ohm	1ohm	±1ohm
Phase of the transducer at a particular point	0~3.14	0.01	±0.01

Echo sounder & Transducer Tester / Simulators

SIM996



SIM996 is a precision instrument designed for generating the reply echo pulse for echo sounders and fish finders. SIM996 receives the incoming pulse parameters from echo sounder/ fish finder and generates echo pulse to simulate the bottom or fish information and then sends the information back.

ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Measurement	160×200×75mm	Depth Options	6m, 12m, 24m, 48m, 96m, 192m
Weight	0.6kg	Temperature	0~50℃
Power	DC8V~25V	Humidity	10%~90% relative
Consumption	<1.2W	Storage	-20~70℃
Emission Freq	24kHz, 28kHz, 38kHz, 45kHz 50kHz, 60kHz, 75kHz, 200kHz	Protection	IPX2

SIM999

SIM999 is a handheld portable tester for Doppler speed log, transducer and NMEA0183 (IEC61162-1).

Doppler speed log tester

SIM999 can measure the output of a Doppler speed log, and if required, reply with a user defined signal to simulate operation of the transducer.

NMEA0183 tester

SIM999 receives and displays the NMEA0183 signal.



PARAMETERS	RANGE	RESOLUTION	ACCURACY
Input Frequency	900 kHz - 2100 kHz	100 kHz	±10 kHz
Input Width	9,000 us - 60,000 us	100 us	±100 us
Input Amplitude	50 V - 400 V	N/A	N/A
Center Frequency	1000 kHz - 2000 kHz	1 kHz	±1 kHz
Output Depth	0 m - 9 m	1 m	±0.1 m
Output Width	0 ms - 20 ms	1 ms	±0.1 ms
Output Angle	20 Deg - 80 Deg	1 Deg	±0.5 Deg
Low Speed	-10 kn - 40 kn	1 kn	±0.5 kn
High Speed	-10 kn - 40 kn	1 kn	±0.5 kn
Step Frequency	0 kn - 10 kn	1 kn	±0.5 kn
Step Time	0 min - 5 min	1 min	±0.1 min

NMEA0183 Tester SIM183



NMEA0183 tester SIM183 is a handheld portable tester for testing transmit-received NMEA0183 signals, with lithium battery for 9-hour continuous working. SIM183 can receive and display NMEA0183 signal from an external device, and test baud rate and peak value of the received signal. It also can send the selected NMEA0183 sentence (optional 142 kind of NMEA0183 sentences) and the baud rate of the transmitted signal can be set. In practical operation, NMEA0183 tester SIM183 can be applied for the installation, debugging and trouble removal.

FEATURES

- ★ Built-in rechargeable battery, with portable and well-adapted
- ★ Real-time read and display NMEA0183 sentences
- ★ Test the peak value of received signals
- ★ Auto test baud rate of received signals
- ★ Send optional 142 kind of standard NMEA0183 sentences
- ★ Customizable parameters in common NMEA0183 sentences for sounder and Speed log
- ★ Big screen green with black words on LCD display

ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Display	128×64 dot-matrix LCD	Battery charger	12.6V / 350mA
Dimension	235mm×135mm×55mm	Working Temperature	-15°C ~ +55°C
Weight(battery included)	0.6kg	Waterproof	IP23
Recharge lithium battery	12.6VDC 1500mAh		

Users can select the NMEA0183 sentences to send to an external device. The data in the sentence can be set as 123456789, such as 12.3kn, 123.4m. The optional 142 kind of NMEA0183 sentences are bellow.

AAM	ACK	ALM	ALR	APB	APA	BEC	BOD	BWC	BWR	BWW	BER
BPI	DBT	DCN	DPT	DSC	DSE	DSI	DSR	DTM	DBK	DBS	DRU
FSI	GBS	GGA	GLC	GLL	GNS	GRS	GSA	GST	GSV	GDa	GLa
GOa	GXa	GTD	GXA	HDG	HDT	HMR	HMS	HSC	HTC	HTD	HCC
HCD	HDM	HVD	HVM	IMA	LCD	MLA	MSK	MSS	MTW	MWD	MWV
MDA	MHU	MMB	MTA	MWH	MWS	OSD	OLN	OLW	OMP	ONZ	RMA
RMB	RMC	ROT	RPM	RSA	RSD	RTE	Rnn	SFI	STN	SBK	SCY
SCD	SDB	SGD	SGR	SIU	SLC	SNC	SNU	SPS	SSF	STC	STR
SYS	TLB	TLL	TTM	TXT	TEC	TEP	TGA	TIF	TRF	TRP	TRS
VBW	VDR	VHW	VLW	VPW	VTG	VCD	VPE	VTa	VTI	VVE	VWR
VWT	WCV	WNC	WPL	WDC	WDR	WFM	WNR	XDR	XTE	XTR	YWP
YWS	ZDA	ZDL	ZFO	ZTG	Zaa	ZCD	ZEV	ZLZ	ZZU		

Accessories

1 to 8 NMEA0183 distributor/ buffer NMEA9108/NMEA918

Option 1: Rail Installation NMEA9108



EMC TEST PASSED!

- ★ EMC test pass
- ★ Compatible with all NMEA0183 versions
- ★ Easy installation on the DIN rail
- ★ Power Supply: 24VDC (18 to 33VDC)
- ★ Pluggable screw terminals for quick and easy installation
- ★ LED indication of input signals and power supply
- ★ Input/ output signal speed: up to 115200 bps



1 Input
to 8 Outputs

Option 2: Screw-fix installation NMEA918

- ★ Compatible with all NMEA0183 versions
- ★ Power Supply: 24VDC (18 to 33VDC)
- ★ Input/ output signal speed: up to 115200 bps

2 to 14 NMEA0183 distributor / buffer NMEA917

- ★ 1 input to 14 outputs or 2 channels of 1 input to 7 outputs
- ★ Compatible with all NMEA0183 versions
- ★ Power Supply: 24VDC (18 to 33VDC)
- ★ Input/ output signal speed: up to 115200 bps



DC12V TO DC24V Adaptor DD924



INPUT: 12V 2.5

OUTPUT: 24V 1A

Remote Dimming Control DIM930

