

ZEUS® SR

INSTALLATION MANUAL ENGLISH







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Internet usage

Some features in this product use an internet connection to perform data downloads and uploads. Internet usage via a connected mobile/cell phone internet connection or a pay-per-MB type internet connection may require large data usage. Your service provider may charge you based on the amount of data you transfer. If you are unsure, contact your service provider to confirm rates and restrictions. Contact your service provider for information about charges and data download restrictions.

More information

Document version: 003

Features described in this document may vary from your unit due to connected devices, settings, brand, and continuous software development.

For the latest version of this document in supported languages, and other related documentation, visit www.bandg.com/downloads/zeus-sr.

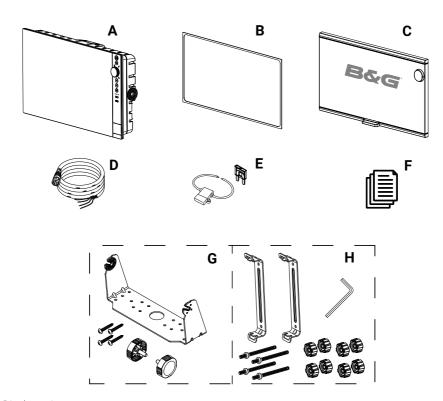
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IN THE BOX

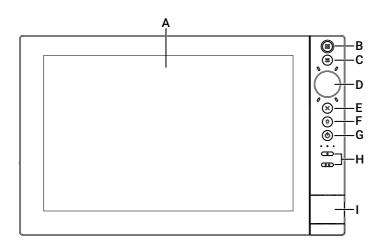


- A Display unit
- B Dash gasket
- **C** Suncover
- **D** Power cable
- E Fuse and fuse holder
- F Documentation pack
- G Gimbal mount kit 10" and 12" units
 - 1x metal bracket
 - 4x #14x 1 in self-tapping pan head screws
 - 2x knobs
 - → Note: 16" unit's gimbal mount kit is sold separately.

H Rear mount kit

- 2x metal brackets
- 4x M4 x 0.7 threaded studs
- 4x pairs of thumb nuts
- 1x 1.5 mm Allen key

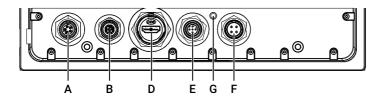
FRONT CONTROLS



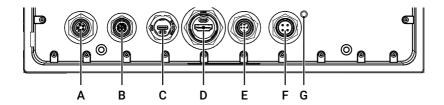
- A Touchscreen
- **B** Home
- **C** App menu
- **D** Scroll wheel
- E Exit
- **F** Waypoint
- **G** Power
- H Customizable keys
 - 1x button on the 10" unit
 - 2x buttons on the 12" and 16" units
- I Memory card door

CONNECTORS

10" unit

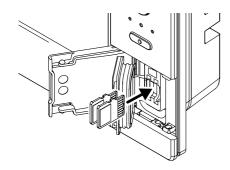


12" and 16" units



- A Ethernet (5-pin, yellow connector)
- **B** Ethernet (X-Coded M12 connector)
- C USB connector video out
- **D** Video input
- E NMEA® 2000 (Micro-C connector)
- **F** Power and other controls (4-pin connector)
- **G** Earth-ground connection point (M4 x 0.7)
- → Notes:
 - Video input and USB connector covers should be fitted when the connectors are not in use.
 - To help minimize interference, corrosion, and electrolysis; use a conducting wire to connect
 the Earth-ground connection point (G) to a point on the hull that is in electrical contact with the
 water. This will ground the unit and network via a bleed path, allowing excess charge to dissipate
 safely.

Memory card reader



A microSD® card can be used to:

- Provide detailed charts
- Update software
- Transfer user data (waypoints, routes, tracks, and screenshots).

→ Notes:

- If a microSD® card and USB storage device are both inserted, by default, data and screenshots
 are saved to the USB storage device.
- Do not download, transfer or copy files to a chart card as it can damage chart information on the card.
- MicroSD® cards up to a maximum of 256 GB are supported in FAT® 32, ExFAT®, or NTFS® file system.
- Always shut the protective cover securely after inserting or removing a microSD® card to keep the slot watertight.

INSTALLATION

General mounting guidelines

Choose a mounting location that will not expose the unit to conditions that exceed the technical specifications.

<u>MARNING</u>: Do not install the unit in a hazardous/flammable atmosphere. Always wear appropriate eye wear, ear protection and dust mask when drilling, cutting, or sanding. Remember to check the reverse side of all surfaces whenever drilling or cutting.

Mounting location

This product generates heat which must be considered when choosing the mounting location.

Ensure the selected area allows for:

- · Cable routing, cable connection and cable support.
- Connection and use of USB storage devices.

Do also consider:

- The free space around the unit to avoid overheating.
- · The mounting surface's structure and strength, with regard to the weight of the equipment.
- Any mounting surface vibration that might damage the equipment.
- Hidden electrical wires that might be damaged when drilling holes.

Sun cover

The sun cover is not intended to be used when the vessel is in motion or in tow. It may become detached at high speeds. Always remove the sun cover before traveling.

Ventilation

Inadequate ventilation and subsequent overheating of the unit may cause reduced performance and reduced service life. Ventilation is recommended behind all units that are not bracket mounted.

Ensure cables do not obstruct the airflow.

Examples of enclosure ventilation options, in order of preference, are:

- Positive pressure air from the vessel's air conditioning system.
- Positive pressure air from local cooling fans (fan required at input, fan optional at outlet).
- Passive airflow from air vents.

Electrical and radio frequency interference

This unit conforms with the appropriate Electromagnetic Compatibility (EMC) regulations. To ensure the EMC performance is not compromised, the following guidelines apply:

- Use a separate battery for the vessel engine.
- Minimum 1 m (3 ft) between the device, the device's cables and any transmitting equipment or cables with radio signals.
- Minimum 2 m (7 ft) between the device, the device's cables and the SSB radio.
- More than 2 m (7 ft) between the device, the device's cables and the radar beam.

Compass safe distance

The unit outputs electromagnetic interference that can cause inaccurate readings on a nearby compass. To prevent compass inaccuracy, the unit must be mounted far enough away so the interference does not affect compass readings. For minimum compass safe distance, refer to the technical specifications table.

Wi-Fi®

It is important to test the Wi-Fi® performance at your chosen location before you install the unit.

It is important to keep your country setting up to date. Go to **Settings > Preferences > Country** to change the unit's country setting.

 $Construction\ material\ (steel,\ aluminum\ or\ carbon)\ and\ heavy\ structures\ will\ affect\ Wi-Fi^{\it @}\ performance.$

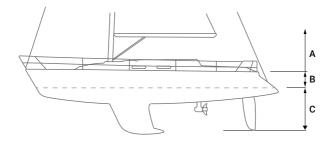
The following guidelines apply:

- Select a location with a clear, direct line of sight between Wi-Fi® connected units.
- Keep the distance between Wi-Fi® units as short as possible.
- Mount the unit at least 1 m (3 ft) away from equipment that might generate interference.

GPS

It is important to test the GPS performance at your chosen location before you install the unit. Construction material (steel, aluminum or carbon) and heavy structure will affect GPS performance. Avoid a mounting location where metal obstacles block the view of the sky.

A well-placed external GPS module can be added to overcome poor performance.



- A Optimal location (above deck)
- **B** Less effective location
- **C** Not recommended location
- → Note: Consider the lateral swinging if mounting the GPS sensor high above sea level. Roll and pitch might give false positions and affect the true directional movement.

Touchscreen

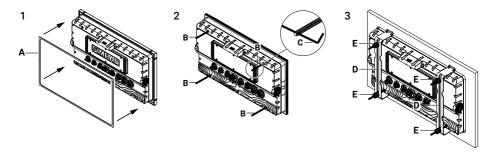
Touchscreen performance can be affected by the location of the unit. Avoid locations where the screen is exposed to direct sunlight or prolonged rainfall.

Panel mount

Refer to the mounting template for illustrated panel mounting instructions.

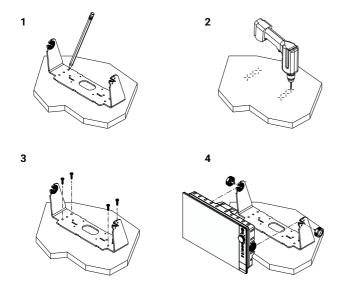
Rear mount

- 1 Apply the provided gasket (A) to the gasket channel on the display unit.
- 2 Hand-tighten the four threaded studs (provided) (B) into the brass inserts on the back case, and use the provided Allen (C) key to tighten.
- 3 Place the display unit into the dash cutout, fit the rear mount brackets (**D**) over the studs, and secure with two thumb nuts (**E**) per stud, turning them clockwise.



Gimbal mount

- 1 Position the bracket with ample height to tilt the unit, and ensure space for knob adjustments on both sides. Mark the screw locations using the bracket as a template.
- 2 Drill pilot holes.
- 3 Screw down the bracket using fasteners suitable for the material you are mounting the bracket on.
- 4 Mount the unit to the bracket using the knobs. Hand-tighten only.
- → Note: The 4 screws shown below are for illustration purposes only. Use fasteners suitable for the mounting surface. Use as many fasteners as needed to secure the installation.



WIRING

Wiring guidelines

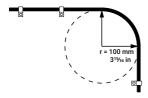
Unless otherwise stated, only use the supplied cable/s. If you need to use a non-supplied cable, ensure it is the correct quality, length and gauge for its intended purpose.

Don't:

- Make sharp bends in the cables.
- Run cables in a way that allows water to flow down into the connectors.
- Run the data cables adjacent to radar, transmitter, or large/high current carrying cables or high frequency signal cables.
- Run cables so they interfere with mechanical systems.
- · Run cables over sharp edges or burrs.

Do:

- Make drip and service loops.
- Ensure a minimum bend radius of 100 mm (315/16 in) where possible.



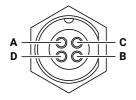
- Use cable-ties on all cables to keep them secure.
- Solder/crimp and insulate all wiring connections if extending or shortening the cables. Extending
 cables should be done with suitable crimp connectors or solder and heat shrink. Keep joins as
 high as possible to minimize the possibility of water immersion.
- Leave room adjacent to connectors to ease the plugging and unplugging of cables.
- Follow any grounding advice provided in the product documentation.

<u>MARNING</u>: Before starting the installation, turn the electrical power off. If power is left on or turned on during the installation, fire, electrical shock, or other serious injury may occur. Be sure that the voltage of the power supply is compatible with the unit.

Power and other controls

The power connector is used for power, power control, and an external alarm.

Power connector details



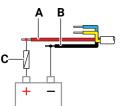
- A DC negative
- **B** Power control
- C 12 or 24 V DC
- **D** External alarm

Power connection

The unit is designed to be powered by 12 or 24 V DC.

It is protected against reverse polarity, under voltage and over voltage (for a limited duration).

A fuse or circuit breaker should be fitted to the positive supply. Refer to the technical specifications section of this document for fuse rating.



- **A** 12 or 24 V DC (red)
- **B** DC negative (black)
- **C** Fuse (for the recommended rating, refer to the technical specifications section of this document)

Power control connection

The yellow wire in the power cable can be used to control how the unit is turned on and off.

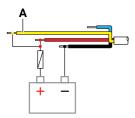
Power controlled by power key

The unit will turn on/off when the power key on the unit is pressed. Leave the yellow power control wire disconnected and tape or heat-shrink the end to prevent a short circuit.

Power control by supply power

The unit will turn on/off without using the power key when power is applied/removed. Connect the yellow wire to the red wire after the fuse.

→ Note: The unit cannot be powered down by the power key, but can be put in to standby mode (the screen backlight turns off).

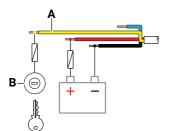


A Power control (yellow)

Power controlled by ignition

The unit will turn on when the ignition is turned on to start engines.

→ Note: Engine start batteries and house batteries should have a common ground connection.



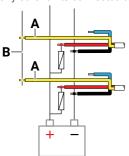
- A Power control (yellow)
- **B** Ignition switch

Power controlled by power control bus

The yellow power control wire can either be an input that will turn the unit on when power is applied, or an output that turns on other devices when the unit is powered on. It can be configured to control the power state of displays and compatible devices by going to:

Settings > Boat network > Devices > This Device > MFD > Show Details > Power control.

The unit can be set to be a primary or secondary power control. If a unit is configured as primary and turned on by the power key, it will output voltage on the power bus. This will power on other primary units and secondary units. If a unit is set to secondary power control, it cannot be powered down using its own power key while a primary power control unit is turned on. If all primary power control units are off, secondary units can be turned on and off using their own power key. However, this will not turn on any other units connected to the power bus.

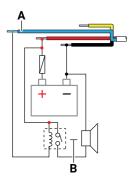


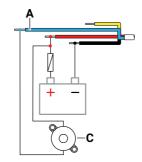
- **A** Power control wire (yellow)
- B Power control bus

External alarm

External alarm

Connect the blue wire in the power cable to an external buzzer or siren to trigger an external alarm.





- External alarm output (blue)
- B Siren and relay
- C Buzzer
 - Note: Use a relay for sirens that draw more than 1 A.

NMEA 2000®

The NMEA 2000® data port allows the receiving and sharing of data, including commands and status, from various sources.

Connector details



- A Shield
- **B** NET-S (12 V DC)
- C NET-C (DC negative)
- D NET-H
- E NET-L

USB



The USB port can be used to connect a:

- · Storage device
- Card reader
- · Video out via an optional adapter

→ Notes:

- USB devices should be standard PC-compatible hardware.
- If using the video output feature, we recommend use of an external GPS module.

Video input

The unit should be turned off prior to connecting or disconnecting a video cable.



Video input cable requirements

Video input signal may be compromised on long cable runs. Only use Navico Group cables or other high-quality video cables. Third-party cables should be tested before installation. On cable runs over 10 m, you may need to add a video amplifier or use video-to-Cat 6 adapters.

Ethernet

The Ethernet port(s) can be used for data transfer and synchronization of user-created data. No special setup is required for establishing an Ethernet network.

The unit supports network speeds up to 1 Gbps on the X-coded M12 Gigabit Ethernet (GbE) connector. This enables high-bandwidth applications and more advanced sensors and devices. The X-coded M12 GbE connector is compatible with yellow 5-pin Ethernet devices via an optional adapter, but the X-coded M12 GbE connector will transmit data at a lower rate.

→ Note: Only one X-coded M12 GbE to yellow Ethernet adapter may be used between devices.

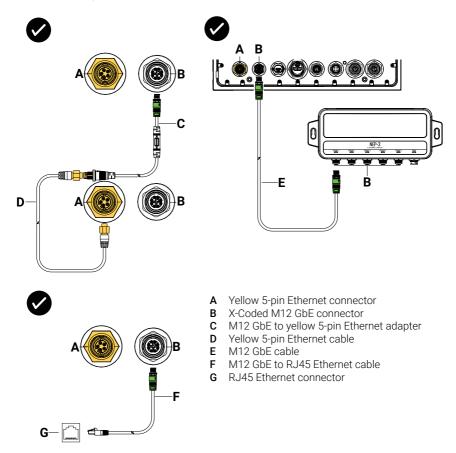
Ethernet connector (X-Coded M12, GbE) details



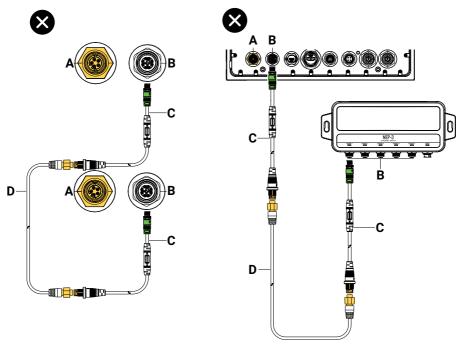
X-Coded M12 Gigabit Ethernet cable requirements

Only use Navico Group cables or other high-quality Cat 6 SF/FTP Ethernet cables.

Navico X-Coded M12 GbE cables have keyed connectors to prevent accidental damage to the connector pins. The unit is compatible with all standard X-coded M12 GbE connectors.



Do not use more than one X-Coded M12 GbE to yellow 5-pin Ethernet adapter when connecting devices.



- A Yellow 5-pin Ethernet connector
- B X-Coded M12 GbE connector
- C M12 GbE to yellow 5-pin adapter
- **D** Yellow 5-pin Ethernet cable

Ethernet connector (yellow, 5-pin) details



- A Transmit positive TX+
- B Transmit negative TX-
- C Receive positive RX+
- **D** Receive negative RX-
- **E** Shield

Ethernet expansion device

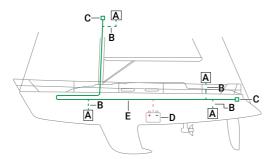
Connect an Ethernet expansion device to connect to multiple network devices. Additional Ethernet expansion devices can be added to provide the required number of ports.

NMEA 2000® PLANNING AND INSTALLATION

An NMEA 2000 $^{\circ}$ network consists of a powered backbone from which drop cables connect to NMEA 2000 $^{\circ}$ devices. The backbone typically runs from bow to stern within 6 m (20 ft) of the locations of the products to be connected.

The following guidelines apply:

- Supply voltage must be 12 V DC (9 16 V DC).
- · Supply current must not exceed 3 A.
- Power source must not exceed 3% voltage drop at power insertion point on the backbone (ABYC® E-11).
- The total length of the backbone must not exceed 100 m (328 ft).
- A single drop cable has a maximum length of 6 m (20 ft). The total length of all drop cables combined must not exceed 78 m (256 ft).
- A terminator must be installed at each end of the backbone. This can be a terminator plug or a unit
 with a built-in terminator.



- A NMEA 2000® device
- **B** Drop cable
- C Terminator
- **D** Power supply 12 V DC
- E Backbone

NMEA 2000® network power

The NMEA 2000® network requires its own 12 V DC power supply, protected by a 3 A fuse.

→ Note: Do not connect the NMEA 2000® power cable to the engine start batteries, autopilot computer, bow thruster or other high-current devices.

Network devices may experience communication errors if they receive less than 9.5 V DC. To ensure reliability and safe operation, use a derated battery or power supply value to calculate the network voltage drop. Check your battery or power supply manufacturer's documentation for the derating factor. Voltage drop calculations are based on Ohm's Law.

$V = I \times R$

V = voltage drop estimate (**VD**)

I = total network LEN (NL) × 0.1

R = total network length in meters (BL) × cable resistance (Z)

$VD = (0.1 \times NL) \times (BL \times Z)$

→ Notes:

 LEN (Load Equivalency Number) represents the current draw of a device. 1 LEN equals 50 mA (0.050 A)

Refer to network device manufacturer for LEN value.

- If the cable length is measured in feet, multiply the cable length by 0.3.
- Cable resistance (Z) for each type of network cable:
 - Lite cable = 0.057 Ω / Meter
 - Medium cable = 0.015 Ω / Meter
 - Heavy cable = 0.012 Ω / Meter

Sample voltage drop calculation 7.7 m (25.3 ft) 1.8 m (5.9 ft) 0.6m (2 ft) 1.8 m (5.9 ft) ပ 1.8 m (5.9 ft) 4.5 m (14.8 ft) 4.5 m (14.5 ft) മ∙ 4.5 m (14.8 ft) LE 5 EN 4.5 m (14.8 ft) 1 m (3.3 ft)

				I			Segment	1	2	3	4	
Left branch	ıch						Doolshoup	10 0	4 F m	10 20	7.7	
	Segment	1	2	3			backbone length	0.0	J. C.	0.	= /./	
	Backbone length	1.8 m	4.5 m	4.5 m			Drop length	1.8 m	0.6 m	2.4 m	1 m	
	Drop length	4.5 m	4.5 m	5.5 m		Device	Net load					
Device	Device Net load					1	1 LEN	0.021				
1	3 LEN	0.108				2	3 LEN	0.062	0.087			
2	5 LEN	0.180	0.257			က	2 LEN	0.041	0.058	0.048		
3	1 LEN	0.036	0.051	0.057	Voltage drop	4	1 LEN	0.021	0.029	0.024	0.050	Voltage drop
Totals	9 LEN	0.323	0.308	0.057	0.688 V DC	Totals	7 LEN	0.144	0.144 0.174	0.072	0:020	0.439 V DC

Power insertion point Left branch Right branch

Voltage drop estimation		
	Left	Right
Minimum supply voltage (de-rated supply)	11 V DC	11 V DC
3% loss at insertion	-0.33 V DC	-0.33 V DC
Voltage drop	-0.688 V DC	-0.439 V DC
Voltage at the end point	9.982 V DC	10.231 V DC

If the voltage at the end point is less than 9.5 V DC, you can:

- Move the power insertion point.
- Use Navico Group medium-duty NMEA 2000® cables.
- Add a CZone® Network Bridge Interface (NBI) to the center of the NMEA 2000® bus, and connect
 power at the midpoint of each side.

SUPPORTED DATA

NMEA 2000® PGN (receive)

59392ISO Acknowledgment59904ISO Request60160ISO Transport Protocol, Data Transfer60416ISO Transport Protocol, Connection M60928ISO Address Claim65240ISO Commanded Address126208ISO Command Group Function126992System Time126996Product Info126998Configuration Information127233Man Overboard Notification (MOB)127245Rudder127250Vessel Heading127251Rate of Turn127252Heave127253Attitude127488Engine Parameters, Rapid Update127489Engine Parameters, Dynamic127490Electric Drive Status (Dynamic)127491Electric Energy Storage Status (Dynamic)127492Electric Energy Storage Information127493Transmission Parameters, Dynamic127494Electric Energy Storage Information127500Load Controller Connection State/Control127501Binary Status Report127503AC Input status127504AC Output Status127505Fluid Level127506DC Detailed Status127507Charger Status128002Electric Energy Storage Status (Rapid Update)128003Electric Energy Storage Status (Rapid Update)		<u> </u>			
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126996 Product Info 126998 Configuration Information 127233 Man Overboard Notification (MOB) 127237 Heading/Track Control 127245 Rudder 127250 Vessel Heading 127251 Rate of Turn 127252 Heave 127257 Attitude 127258 Magnetic Variation 127488 Engine Parameters, Rapid Update 127490 Electric Drive Status (Dynamic) 127491 Electric Energy Storage Status (Dynamic) 127493 Transmission Parameters, Dynamic 127494 Electric Energy Storage Information 127495 Electric Energy Storage Information 127500 Load Controller Connection State/Control 127501 Binary Status Report 127503 AC Input status 127504 AC Output Status 127505 Fluid Level 127506 DC Detailed Status 127507 Charger Status 127508 Battery Status 127509 Inverter Status 128002 Electric Energy Storage Status (Rapid 128003 Electric Energy Storage Status (Rapid	126208	ISO Command Group Function			
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127505 Fluid Level 127506 DC Detailed Status 127507 Charger Status 127508 Battery Status 127509 Inverter Status 128002 Electric Drive Status (Rapid Update) 128003 Electric Energy Storage Status (Rapid	127503	AC Input status			
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127507 Charger Status 127508 Battery Status 127509 Inverter Status 128002 Electric Drive Status (Rapid Update) 128003 Electric Energy Storage Status (Rapid	127505	Fluid Level			
127508 Battery Status 127509 Inverter Status 128002 Electric Drive Status (Rapid Update) 128003 Electric Energy Storage Status (Rapid	127506	DC Detailed Status			
127509 Inverter Status 128002 Electric Drive Status (Rapid Update) 128003 Electric Energy Storage Status (Rapid	127507	Charger Status			
128002 Electric Drive Status (Rapid Update) 128003 Electric Energy Storage Status (Rapid	127508	Battery Status			
128003 Electric Energy Storage Status (Rapid	127509	Inverter Status			
(-	128002	Electric Drive Status (Rapid Update)			
	128003				

128259	Speed, Water referenced			
128267	Water Depth			
128275	Distance Log			
128780	Linear Actuator Control / Status			
129025	Position, Rapid Update			
129026	COG & SOG, Rapid Update			
129029	GNSS Position Data			
129033	Time & Date			
129038	AIS Class A Position Report			
129039	AIS Class B Position Report			
129040	AIS Class B Extended Position Report			
129041	AIS Aids to Navigation (AtoN) Report			
129283	Cross Track Error			
129284	Navigation Data			
129539	GNSS DOPs			
129540	GNSS Sats in View			
129545	GNSS RAIM Output			
129549	DGNSS Corrections			
129551	GNSS Differential Correction Receiver Signal			
129793	AIS UTC and Date Report			
129794	AIS Class A Static and Voyage Related Data			
129798	AIS SAR Aircraft Position Report			
129799	Radio Frequency / Mode / Power			
129801	AIS Addressed Safety Related Message			
129802	AIS Safety Related Broadcast Message			
129808	DSC Call Information			
129809	AIS Class B "CS" Static Data Report, Part A			
129810	AIS Class B "CS" Static Data Report, Part B			
130060	Label			
130074	Route and WP Service - WP List - WP Name & Position			
130306	Wind Data			
130310	Environmental Parameters			
130311	Environmental Parameters			
130312	Temperature			
130313	Humidity			

130314	Actual Pressure			
130316	Temperature, Extended Range			
130330	Lighting System Settings			
130561	Lighting Zone Settings			
130562	Lighting Scene Settings			
130563	Lighting Device Settings			
130564	Lighting Device Enumeration			
130565	Lighting Color Sequences			
130566	Lighting Programs			
130569	Entertainment - Current File and Status			
130570	Entertainment - Library Data File			
130571	Entertainment - Library Data Group			
130572	Entertainment - Library Data Search			
130573	Entertainment - Supported Source Data			
130574	Entertainment - Supported Zone Data			
130576	Small Craft Status			
130577	Direction Data			
130578	Vessel Speed Components			
130579	Entertainment - System Configuration Status			
130580	Entertainment - System Configuration Status			
130581	Entertainment - Zone Configuration Status			
130582	Entertainment - Zone Volume Status			
130583	Entertainment - Available Audio EQ Presets			
130584	Entertainment - Bluetooth® Devices			
130585	Entertainment - Bluetooth® Source Status			

NMEA 2000® PGN (transmit)

60160	ISO Transport Protocol, Data Transfer
60416	ISO Transport Protocol, Connection M
126208	ISO Command Group Function
126992	System Time
126993	Heartbeat
126996	Product Info
127237	Heading/Track Control
127250	Vessel Heading
127258	Magnetic Variation
127502	Switch Bank Control
128259	Speed, Water referenced
128267	Water Depth
128275	Distance Log
129025	Position, Rapid Update
129026	COG & SOG, Rapid Update
129029	GNSS Position Data
129283	Cross Track Error
129285	Navigation - Route/WP Information
129284	Navigation Data
129285	Route/Waypoint Data
129539	GNSS DOPs
129540	GNSS Sats in View
130074	Route and WP Service - WP List - WP Name & Position
130306	Wind Data
130310	Environmental Parameters
130311	Environmental Parameters
130312	Temperature
130577	Direction Data
130578	Vessel Speed Components

OPTIONAL ACCESSORIES

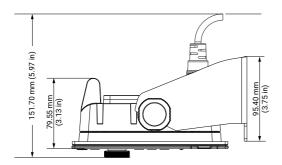
000-16461-001 USB to video out female adapter 000-16448-001 M12 GbE to yellow 5-pin male adapter

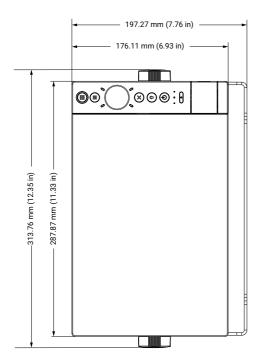
000-16458-001 16" gimbal bracket

For a complete list of compatible accessories, visit www.bandg.com.

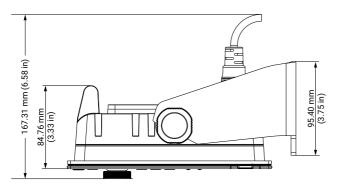
DIMENSIONS

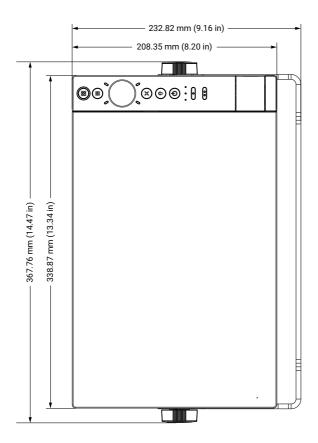
10" unit



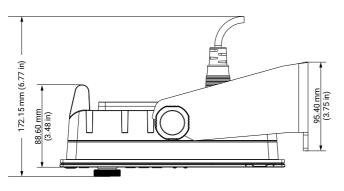


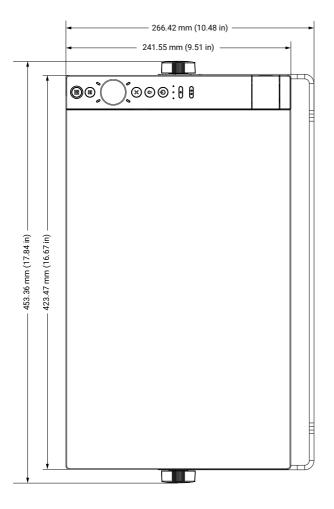
12" unit





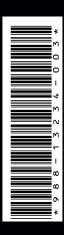
16" unit





TECHNICAL SPECIFICATIONS

Display	10"	12"	16"		
Resolution (px)	1280 x 800	1280 x 800	1920 x 1080		
Luminance	1200 nits (typical)	1200 nits (typical)			
Touchscreen	Full touchscreen (multi-to	uch)			
Viewing angles in degrees	80° top/bottom, 80° left/r	ight (typical value at contras	st ratio = 10)		
Electrical					
Supply voltage	12/24 V DC (10 - 31.2 V D	C min - max)			
Fuse rating	5 A				
Maximum power consumption	28 W	40 W	43.5 W		
Protection	Reverse polarity and over-	voltage (max 32 V)			
Environmental					
Operating temperature range	-15°C to 55°C (5°F to 131°	°F)			
Storage temperature range	-20°C to 60°C (-4°F to 140)°F)			
Waterproof rating	IPX6 and IPX7				
Shock and vibration	100,000 cycles of 20 G				
Interface and connectivity					
GPS	10 Hz GNSS receiver for C Galileo, Beidou, QZSS. SB.	GPS and GLONASS, support AS (WAAS)	s combinations with		
Wi-Fi®	Wi-Fi 5 (IEEE 802.11ac-2013)				
Ethernet	1 port (X-Coded M12 GbE)				
NMEA 2000®	1 port (yellow, 5-pin) 1 port (Micro-C connector)				
Data card slot	2x (microSD®, SDHC®, SDXC®)				
USB	Not applicable 1 port (video output via optional adapter)				
Video	1 port (video input)				
Physical	i port (video iriput)				
Weight (display only)	1.8 kg (3.97 lb)	2.8 kg (6.17 lb)	3.8 kg (8.38 lb)		
Compass safe distance	35 cm (1.15 ft)	65 cm (2.13 ft)			
Mounting type	Gimbal bracket mount or	, ,			
······ 5 1/F +	Giribai bracket mount or rear mount				



50°45'3.18'5"N 1°31'45.971''

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www.bandg.com