Smart Skipper™

By Blue Guard Innovations

Installation / App Setup Manual

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Table of Contents

Overview

Congratulations on your purchase of the Smart Skipper™ remote monitoring and control system. This system will provide you with 24/7 access to critical information about your vessel from virtually anywhere.

Mate devices interface with each other and a dedicated on board tablet via Bluetooth 5.0 mesh technology. This robust, reliable connectivity enables on board and off board monitoring and control capabilities via the Smart Skipper™ app. Instant alert notifications initiate corrective action, providing you confidence that your investment is protected.

Simple Steps to Get Started

1. **Configure your Smart Skipper System with These Essentials:**
   Mate Monitoring Device(s)
   Dedicated On Board Tablet
   Internet Connection (cellular or WiFi)
2. **Download the Smart Skipper™ App**
   Available on Google Play and App Store
3. **Purchase a Cloud Plan Subscription**
   Starting at $4.95/month
4. **Enjoy 24/7 Access to Your Vessel**
   Real-time push, text, and email notifications

Monitoring and Control

Smart Skipper™ detects potential problems and sends users instant notification alerts via push, text message, or email at first sign of system failure.

GPS Location & Geofencing

Door / Hatch Open & Close

Bilge Pumps

Motion & Intrusion Detection

Battery Voltage & Current

High Water, Oil, & Fuel

Shore Power

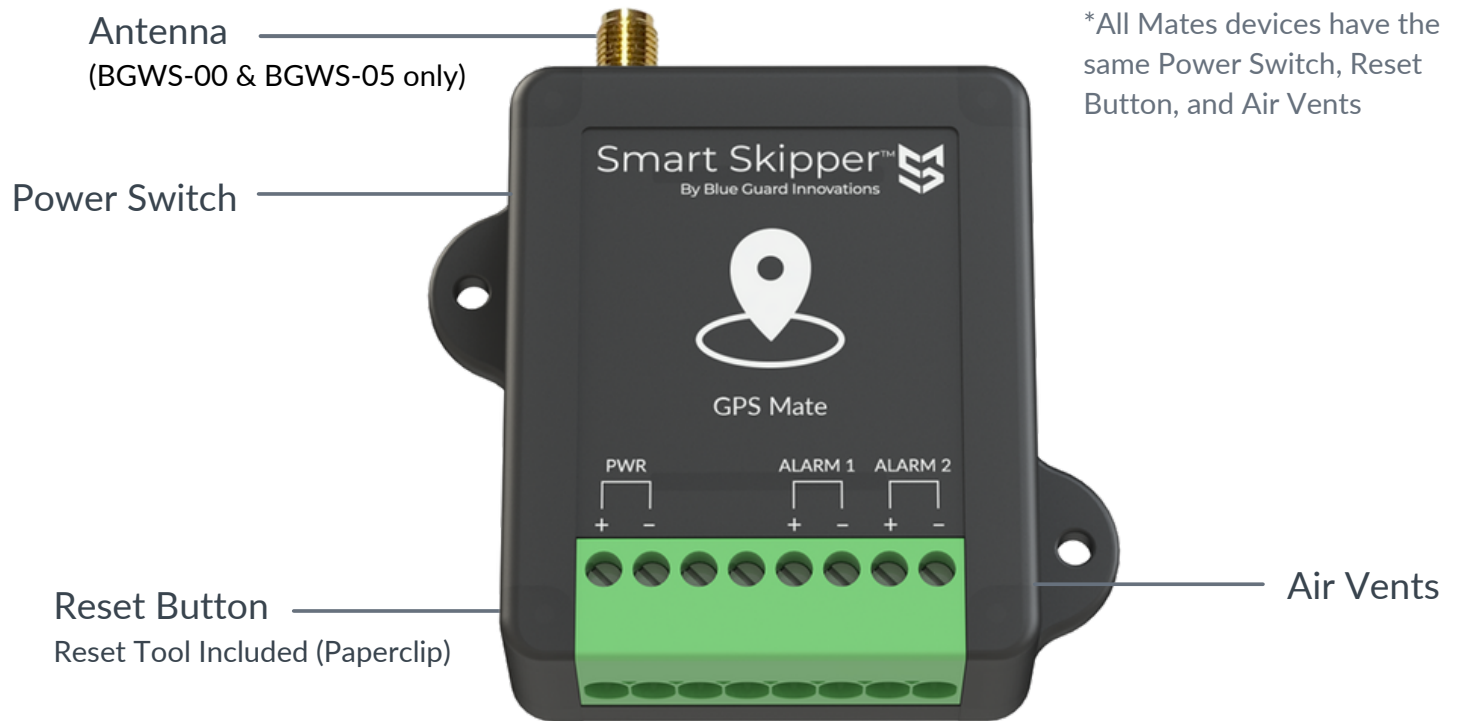Lights, Fans & Pumps

Temperature & Humidty

Satellite Tracking

Water & Fuel Tank Levels

Fire Detection

Mate Device(s)

Antenna
(BGWS-00 & BGWS-05 only)

*All Mates devices have the same Power Switch, Reset Button, and Air Vents

Power Switch

Reset Button
Reset Tool Included (Paperclip)

Air Vents

Characteristics

Power Switch
Use power / reset tool to turn unit ON/OFF.

Reset Button
To remove provisioning, hold reset button until all three LED lights turn ON and then release. The Mate will reset and be able to be re-provisioned.
Note: Release pressure on reset button as soon as all three LEDs come on.

Air Vents
Allows proper internal temperature to be read.

External GPS Antenna Connector
(Only on GPS and Track Mates) Connect external GPS antenna.

General Specs

Status LEDs (BGWS only)
Green - Power
Blue - Connectivity
Red - Alarm

Operating Voltage
9 – 36 Vdc

Power Consumption
35mA @ 12 Vdc (BGWS-00 and BGWS-05 only)
15mA @ 12 Vdc (BGWS)
22mA @ 12 Vdc (SM)

Backup Battery
Lithium Ion, Internally Charged
Lasts Up To 72 Hours

Wireless
Bluetooth 5 with Mesh Network
FCC ID X8WBT840X / IC ID 4100A-BT840X

Operational Conditions
-22 - 167°F / -30 - 75°C
95% R.H. @ 122°F / 50°C Non-Condensing

Size
BGWS-xx: 2.75 x 2.3 x 1.0 in / 69.9 x 58.4 x 25.4 mm
SM-xx: 5.9 x 4.6 x 2.0 in / 150 x 117 x 51 mm (with mounting bracket)
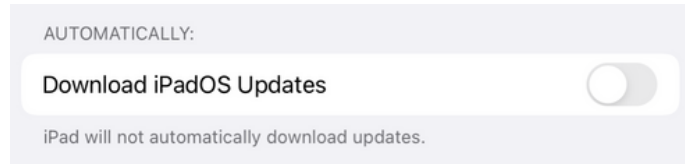
Weight
BGWS-xx: 3.8 oz / 110 g
SM-xx: 18.7 oz / 530 g (with mounting bracket and wiring)
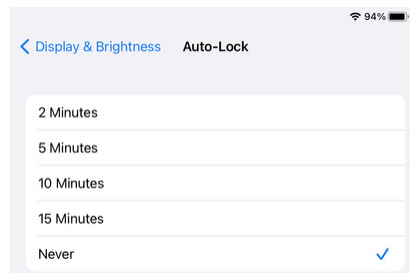
'On Board' Smart Device Setup

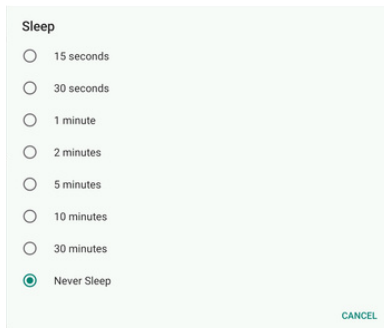Settings → General → Software Update → Automatic Updates

  Toggle "Download iOS Updates" OFF

AUTOMATICALLY:

Download iPadOS Updates

iPad will not automatically download updates.

Settings → Display & Brightness →Auto Lock → Select "Never"

< Display & Brightness Auto-Lock   🔋 94%

2 Minutes

5 Minutes

10 Minutes

15 Minutes

Never   ✓

android

Settings → Display → Sleep → Select "Never Sleep"

Sleep

○ 15 seconds

○ 30 seconds

○ 1 minute

○ 2 minutes

○ 5 minutes

○ 10 minutes

○ 30 minutes

◉ Never Sleep

CANCEL

Settings → Apps & Notifications → Emergency Alerts → Toggle "Allow alerts" OFF

← Emergency alerts

Allow alerts

Receive emergency notifications
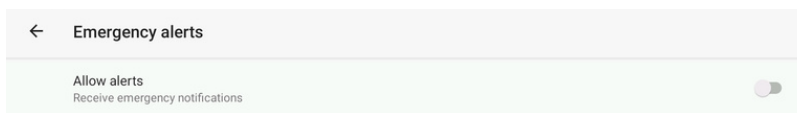
Smart Skipper™ App Setup

1. Download the Smart Skipper™ App (Available on Google Play and App Store)

2. Once downloaded, open up the Smart Skipper™ App and select "Vessel".

3. After selecting "Vessel", you will be prompted to select either "On Board Setup" or "Remote Only Access". Note: You will be prompted to sign up for a new account or login to an existing account.
   - Choose "On Board Setup" if you are setting up the dedicated onboard device that will be used to connect Smart Skipper™ to the cloud.
   - Choose "Remote Only Access" if you are using a separate mobile device that will not stay on board your Vessel or you have been invited to monitor someone else's Vessel.

   Note: Once you sign up, your 30-day free trial begins. After 30 days, you will need to sign up for either a basic or extended storage plan.

4. After selecting "On Board Setup" and successfully completing sign-up/login, you will be prompted to create a new vessel.
   Note: When creating a new vessel, the "Vessel Name" is the only mandatory field to enter. All other fields are optional and can be added at a later time.

5. Once your vessel's information has been entered, your "On Board" device will now begin searching for Smart Mate devices.
   Note: Make sure that your On Board device has Bluetooth enabled.
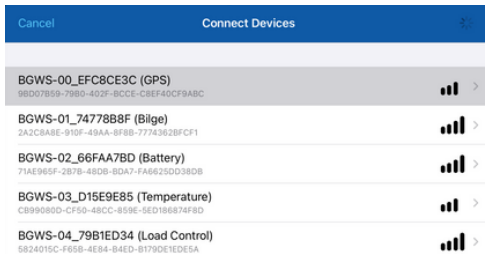
6. To add a Mate device from the list, simply tap on the desired device and the device will begin pairing automatically.
   Note: If the device fails to pair, tap retry.

7. To configure the newly paired Mate device, navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

Smart Skipper™ App Setup

"On Board" Toggle

On Board = On   On Board

- Deactivates alarms/notifications if "Enabled On Board" is toggled off in the relevant alarm tiles
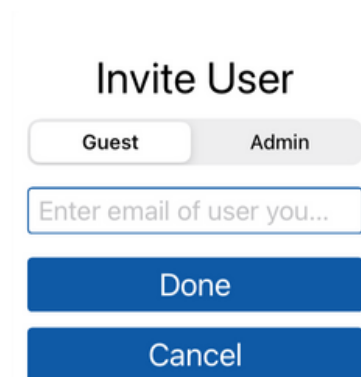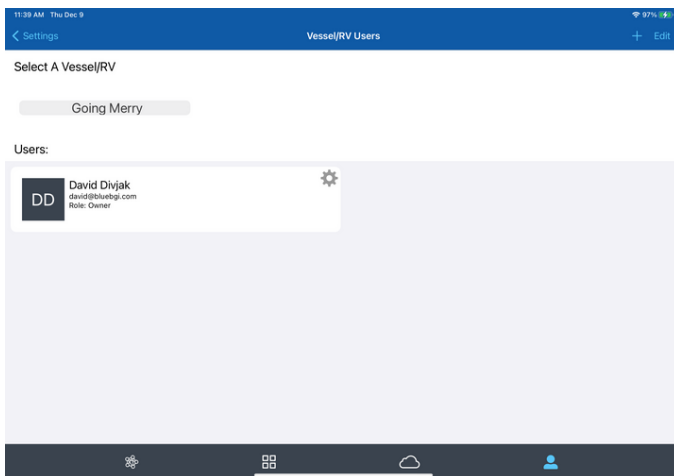
On Board = Off   Off Board

- Activates all alarms/notifications

Invite Users

Step 1: Select the "User Profile" tab

Step 2: Tap on the "+" button in top right corner of page

GPS / Geofence Mate (BGWS-00)

The BGWS-00 includes two additional alarm inputs that can connect to motion detectors, open / close sensors for doors and hatches, and other alarms.

1. **Power In**
9 – 36 Vdc

2. **Ground**
Supply Negative = Ground = Boat Chassis

3. **No Connect**

4. **No Connect**

5. **Digital Alarm 1**
0-36 Vdc
Active-High or Active-Low

6. **Digital Alarm 1 Ground**
Supply Negative = Ground = Boat Chassis

7. **Digital Alarm 2**
0-36 Vdc
Active-High or Active-Low

8. **Digital Alarm 2 Ground**
Supply Negative = Ground = Boat Chassis

9. **Antenna Connector**
External GPS Antenna

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GPS / Geofence Mate

PWR   ALARM 1   ALARM 2
+   -   +   -   +   -
1   2   3   4   5   6   7   8

1 Amp Fuse

Alarm Connections
Fire Detector
Door Open / Close
Motion Detector

+   −
12, 24, 32 Vdc
Vessel Battery
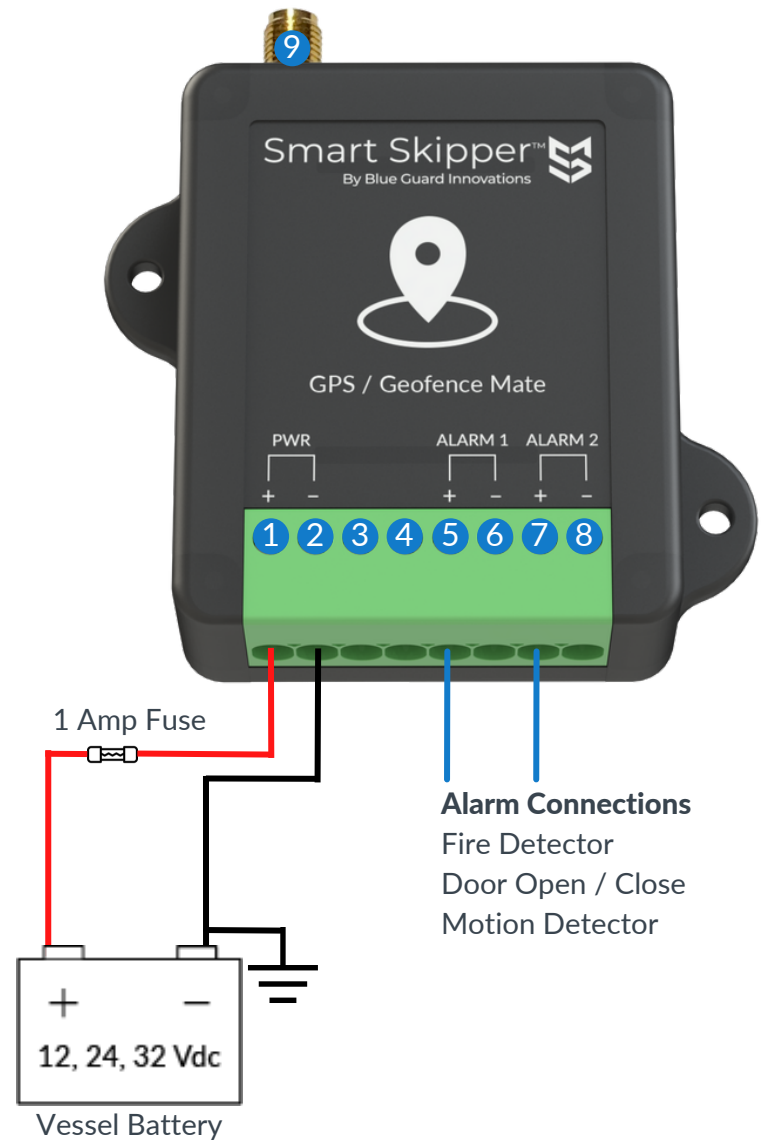
BGWS-00 App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Geofence" tile.

3. Utilize the "slider" above the blue save button to set geofence size. Visually observe the red circle around your Vessel to confirm geofence size.

4. Tap the "Save" button once the geofence size is created in order to save the configuration and return to the "Tiles" home.

   Note: Units of measurement (Fahrenheit and Imperial or Celsius and Metric) can be changed in the user preferences menu.

   Congratulations, your GPS / Geofence Mate is set up!

Bilge Mate (BGWS-01)

The BGWS-01 displays voltage and current draw of the attached pump and includes two additional alarm inputs that can be configured around your vessel's needs.

1. **Power In**
9 – 36 Vdc

2. **Ground**
Supply Negative = Ground = Boat Chassis

3. **Pump In**
Pump power output from float switch

4. **Pump Out**
Power to pump (15 Amps Max)

5. **Digital Alarm 1**
0-36 Vdc
Active-High or Active-Low

6. **Digital Alarm 1 Ground**
Supply Negative = Ground = Boat Chassis
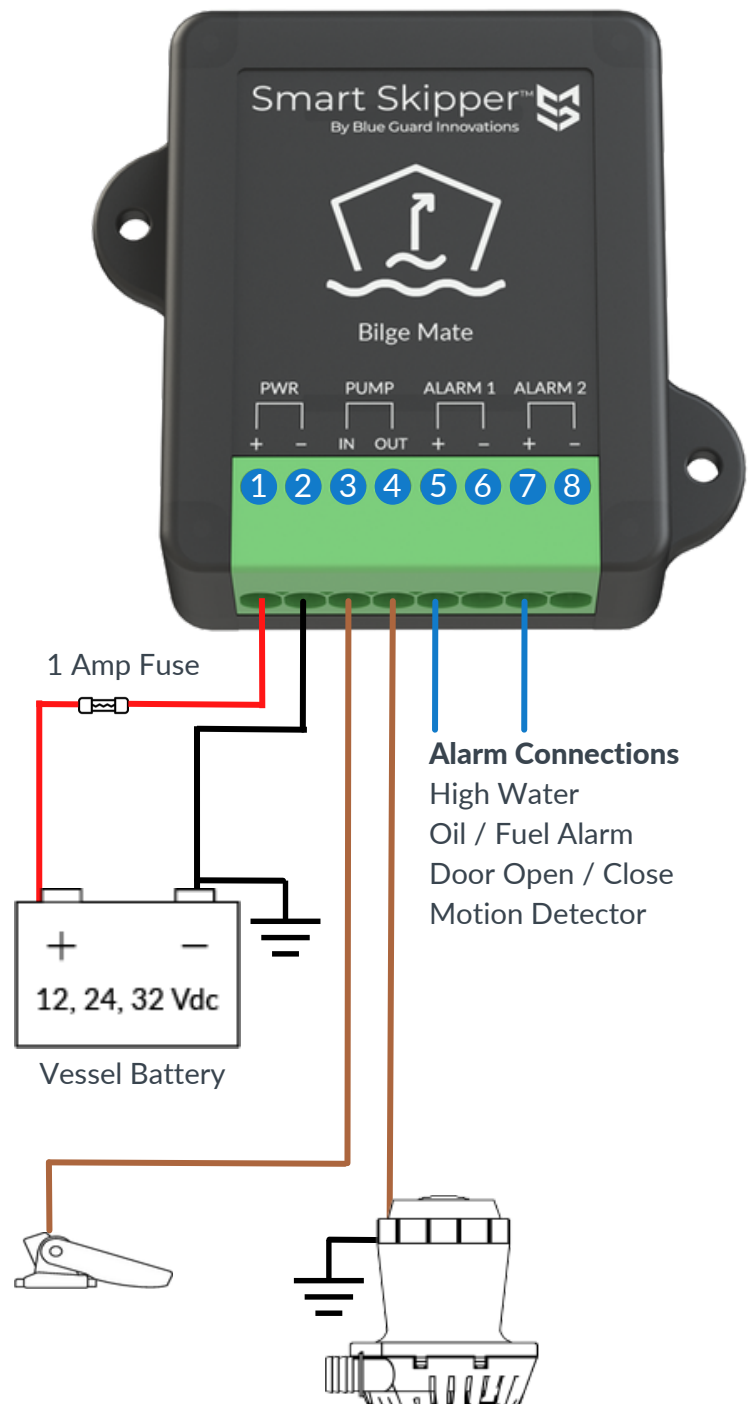
7. **Digital Alarm 2**
0-36 Vdc
Active-High or Active-Low

8. **Digital Alarm 2 Ground**
Supply negative = Ground = Boat Chassis

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Bilge Mate

PWR PUMP ALARM 1 ALARM 2
+ − IN OUT + − + −
1 2 3 4 5 6 7 8

1 Amp Fuse

Alarm Connections
High Water
Oil / Fuel Alarm
Door Open / Close
Motion Detector

+ −
12, 24, 32 Vdc

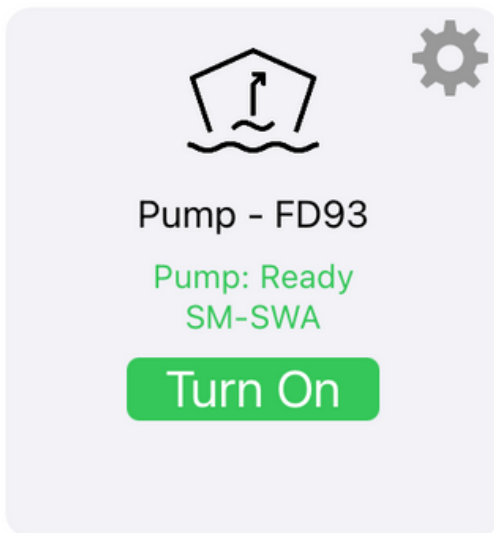Vessel Battery

BGWS-01 App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Bilge" tile.

3. Utilize the "Alarm Run Time" and "Activation Alarm" sliders to configure bilge alarms.
   Alarm Run Time: Alarm for when your bilge pump runs for equal to or more than X amount of time.
   Activation Alarm: Alarm for when your bilge pump cycles equal to or more than X number of times in an hour.

4. Tap the "Save" button once "Alarm Run Time" and "Activation Alarm" are configured in order to save the configuration and return to the "Tiles" home page.

   Congratulations, your Bilge Mate is set up!

Battery Mate (BGWS-02)

The BGWS-02 monitors up to two batteries' voltage and current (50mV shunts required).

1. Power In / Battery 1 Voltage
9 – 36 Vdc

2. Ground
Supply Negative = Ground = Boat Chassis

3. Battery 2 Voltage
9 - 36 Vdc

4. Ground
Supply Negative = Ground = Boat Chassis

5. Shunt 1+
Battery 1 current shunt+ 50 mV

6. Shunt 1-
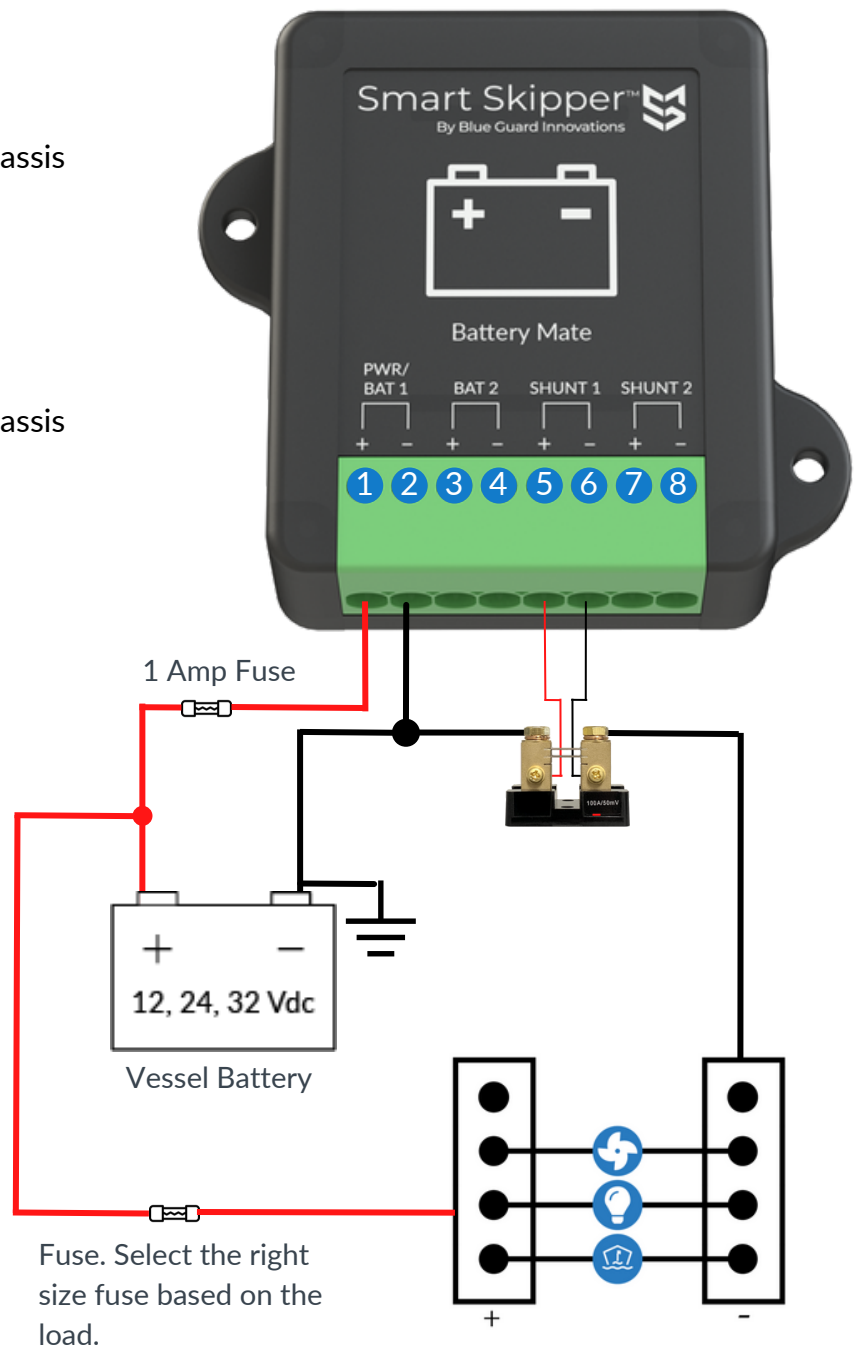Battery 1 current shunt- 50 mV

7. Shunt 2+
Battery 2 current shunt+ 50 mV

8. Shunt 2-
Battery 2 current shunt- 50 mV

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Battery Mate

PWR/ BAT 1   BAT 2   SHUNT 1   SHUNT 2
+ -   + -   + -   + -
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1 Amp Fuse

12, 24, 32 Vdc

Vessel Battery

Fuse. Select the right size fuse based on the load.

BGWS-02 App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Battery" tile. Input the desired settings for the following categories:

    High Voltage Warning: Alarm for when battery voltage is equal to or exceeds X Vdc.

    Low Voltage Warning: Alarm for when battery voltage is equal to or below X Vdc.

    Low Voltage Critical: Secondary alarm for when voltage is equal to or below X Vdc. This must be lower than 'Low Voltage Warning'.

    Current Shunt Size: Size (in Amps) of shunt installed.

    High Current Warning: Alarm for when battery current is equal to or exceeds X Amps.

    Note: High Current Warning can only be configured after "Current Shunt Size" is configured, otherwise High Current Warning is disabled.

3. Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

    Congratulations, your Battery Mate is set up!
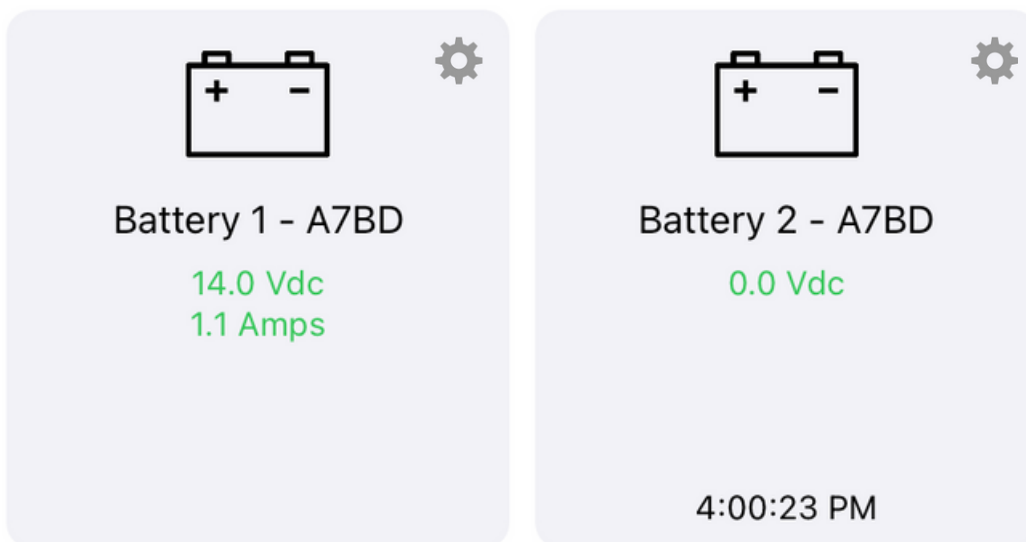
Temperature Mate (BGWS-03)

The BGWS-03 offers two temperature sensors and one humidity sensor and can be mounted in locations such as the boat's cabin, freezer, fish holding tanks, etc.

1. **Power In**
9 – 36 Vdc

2. **Ground**
Supply Negative = Ground = Boat Chassis

3. **External Temperature Probe Signal**
Yellow Wire

4. **External Temperature Probe Power**
Red Wire

5. **External Temperature Probe Ground**
Black Wire

6. **Digital Alarm 1**
0 - 36 Vdc
Active-High or Active-Low
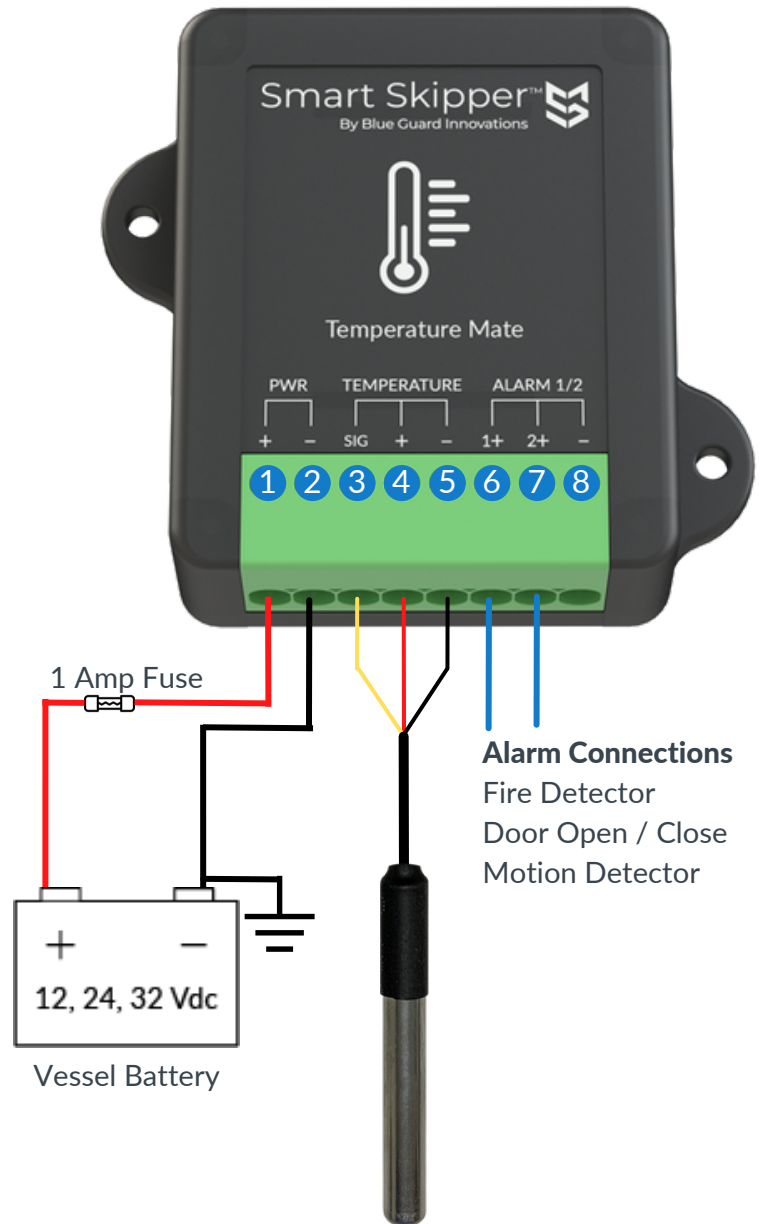
7. **Digital Alarm 2**
0 - 36 Vdc
Active-High or Active-Low

8. **Digital Alarm Ground**
Supply Negative = Ground = Boat Chassis

1 Amp Fuse

Alarm Connections
Fire Detector
Door Open / Close
Motion Detector

12, 24, 32 Vdc

Vessel Battery

BGWS-03 App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Temperature" tile. Input the desired settings for the following categories:

    High External Temperature Alarm: Alarm for when the external temperature is equal to or exceeds X (°F or °C)

    Low External Temperature Alarm: Alarm for when the external temperature is equal to or lowers below X (°F or °C)

    High Internal Temperature Alarm: Alarm for when the internal temperature is equal to or exceeds X (°F or °C)

    Low Internal Temperature Alarm: Alarm for when the internal temperature is equal to or lowers below X (°F or °C)

    High Humidity Alarm: Alarm for when humidity is equal to or exceeds X %

    Low Humidity Alarm: Alarm for when humidity is equal to or lowers below X %

    Note: Units of measurement (Fahrenheit and Imperial or Celsius and Metric) can be changed in the user preferences menu.

3. Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

    Congratulations, your Temperature Mate is set up!
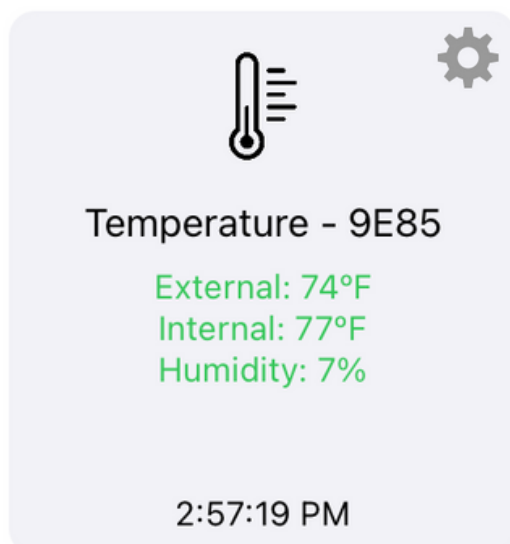
Load Control Mate (BGWS-04)

The BGWS-04 has two additional alarm inputs that can be configured to your vessel's needs and trigger the load output.

1. Power In
9 – 36 Vdc

2. Ground
Supply Negative = Ground = Boat Chassis

3. Switch In / Reset
Power output from the local switch

4. Load Out
9 - 36 Vdc
15 Amps Max

5. Digital Alarm 1
0 - 36 Vdc
Active-High or Active-Low

6. Digital Alarm 1 Ground
Supply Negative = Ground = Boat Chassis

7. Digital Alarm 2
0 - 36 Vdc
Active-High or Active-Low

8. Digital Alarm 2 Ground
Supply Negative = Ground = Boat Chassis

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Load Control Mate

PWR   LOAD   ALARM 1   ALARM 2
+   −   IN   OUT   +   −   +   −
1   2   3   4   5   6   7   8

Alarm Connections
High Water
Oil / Fuel Alarm
Door Open / Close
Motion Detector

12, 24, 32 Vdc
Vessel Battery

Load Connections
Lights
Fans
Air Conditioning

18
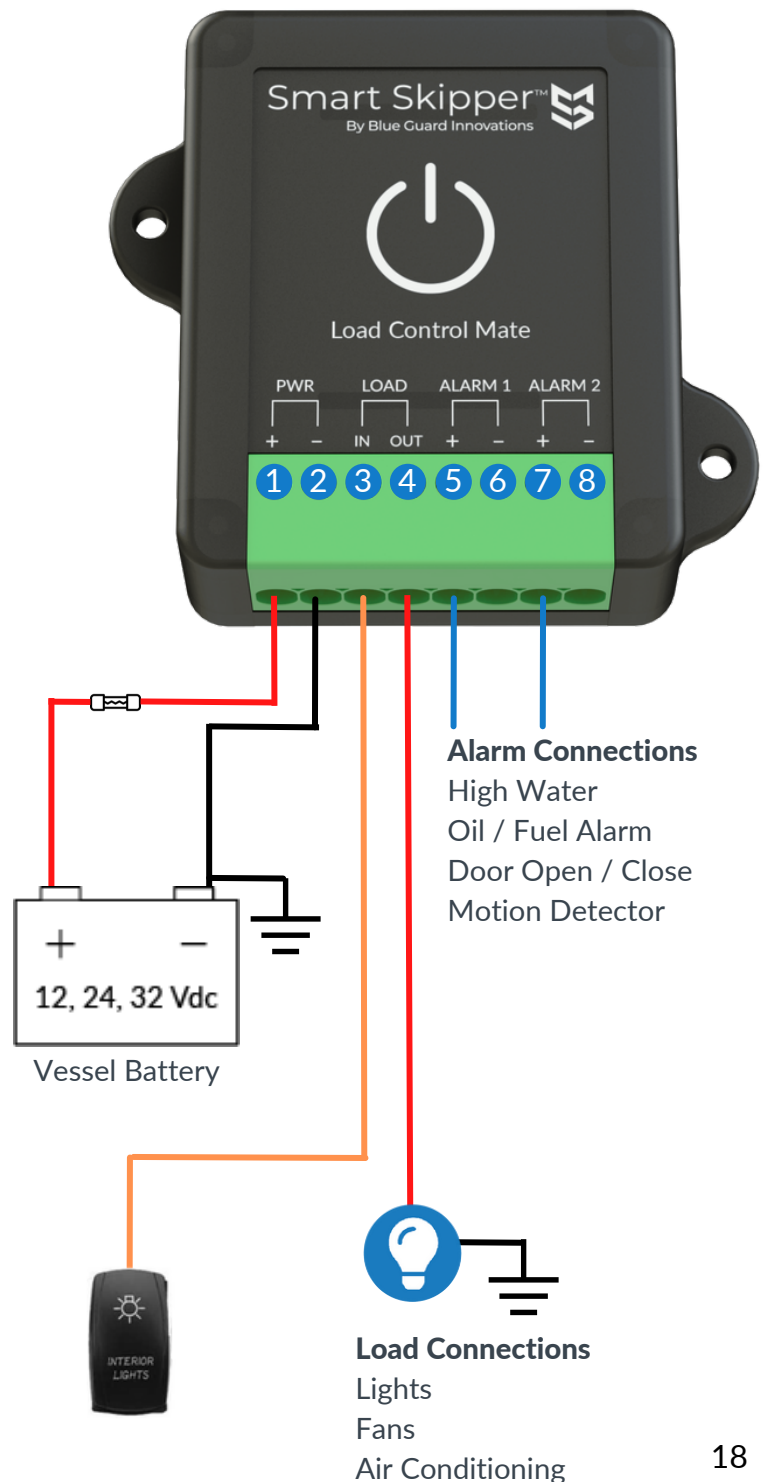
BGWS-04 App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Load" tile.

   By default, the load output is controlled manually. If "Automatically Activate Load on Alarm" is toggled "On", the connected load (e.g. siren, light, etc..) will automatically activate if either of the two alarm inputs is triggered.
   Note: The connected load should not exceed 15 Amps.

3. Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

   Congratulations, your Load Control Mate is set up!
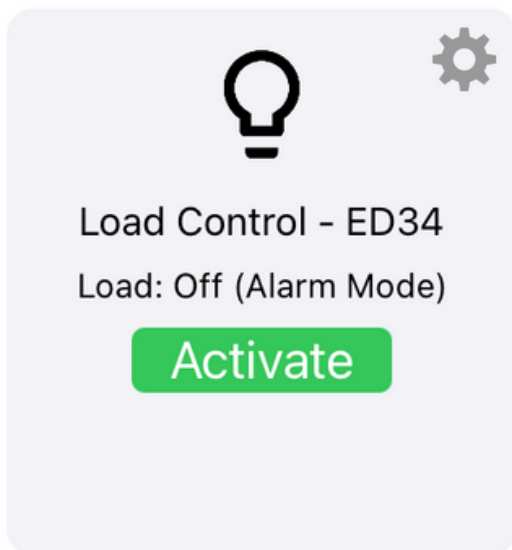
Tank Level Mate (BGWS-06)

The BGWS-06 Tank Level Mate taps into your existing electronic level gauges.

1. **Power In**
9 – 36 Vdc

2. **Ground**
Supply Negative = Ground = Boat Chassis
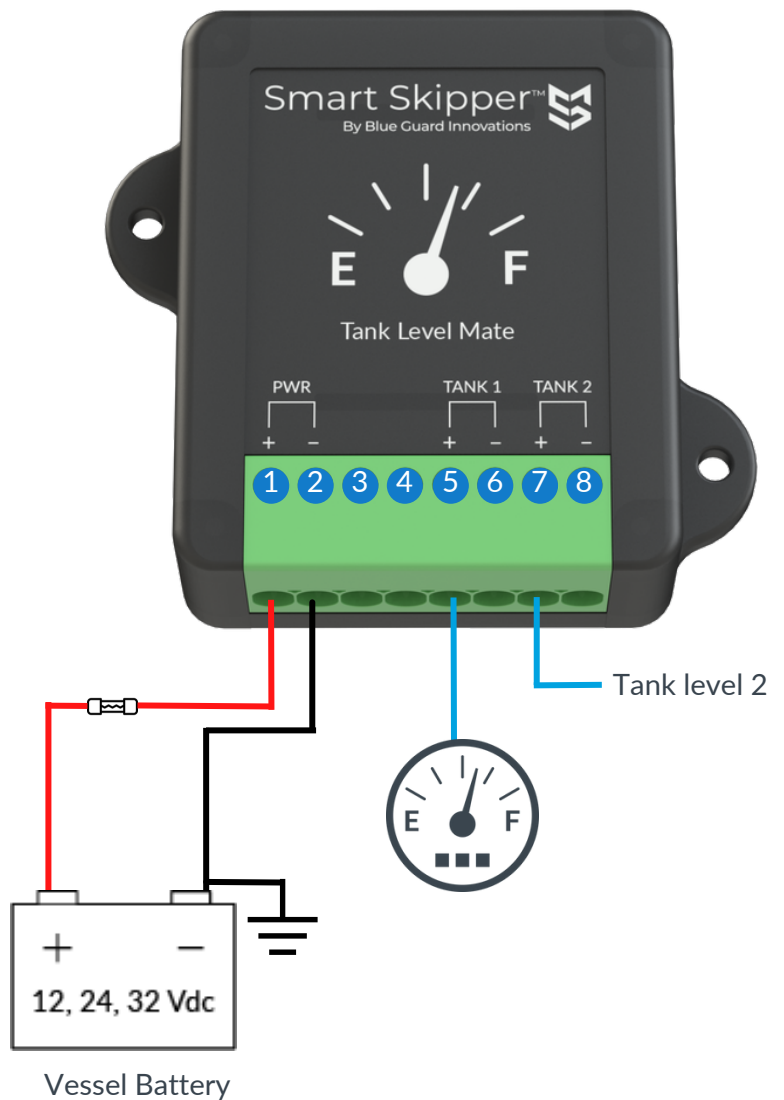
3. **No Connect**

4. **No Connect**

5. **Fuel level gauge 1 +**

6. **Ground**
Supply Negative = Ground = Boat Chassis

7. **Fuel level gauge 2 +**

8. **Ground**
Supply Negative = Ground = Boat Chassis

Tank level 2

Vessel Battery

Bilge Pump Switch with High Water Alarm Mate (SM-SWA)

Bilge Pump Control | High Water Alarm Output | Digital Alarm Input

Black = Ground
Supply Negative = Ground = Boat Chassis

Red = Power In
9 – 36 Vdc
Use 2 Amp fuse

Brown = Pump Positive
Connect to positive pump wire
20 Amps Max

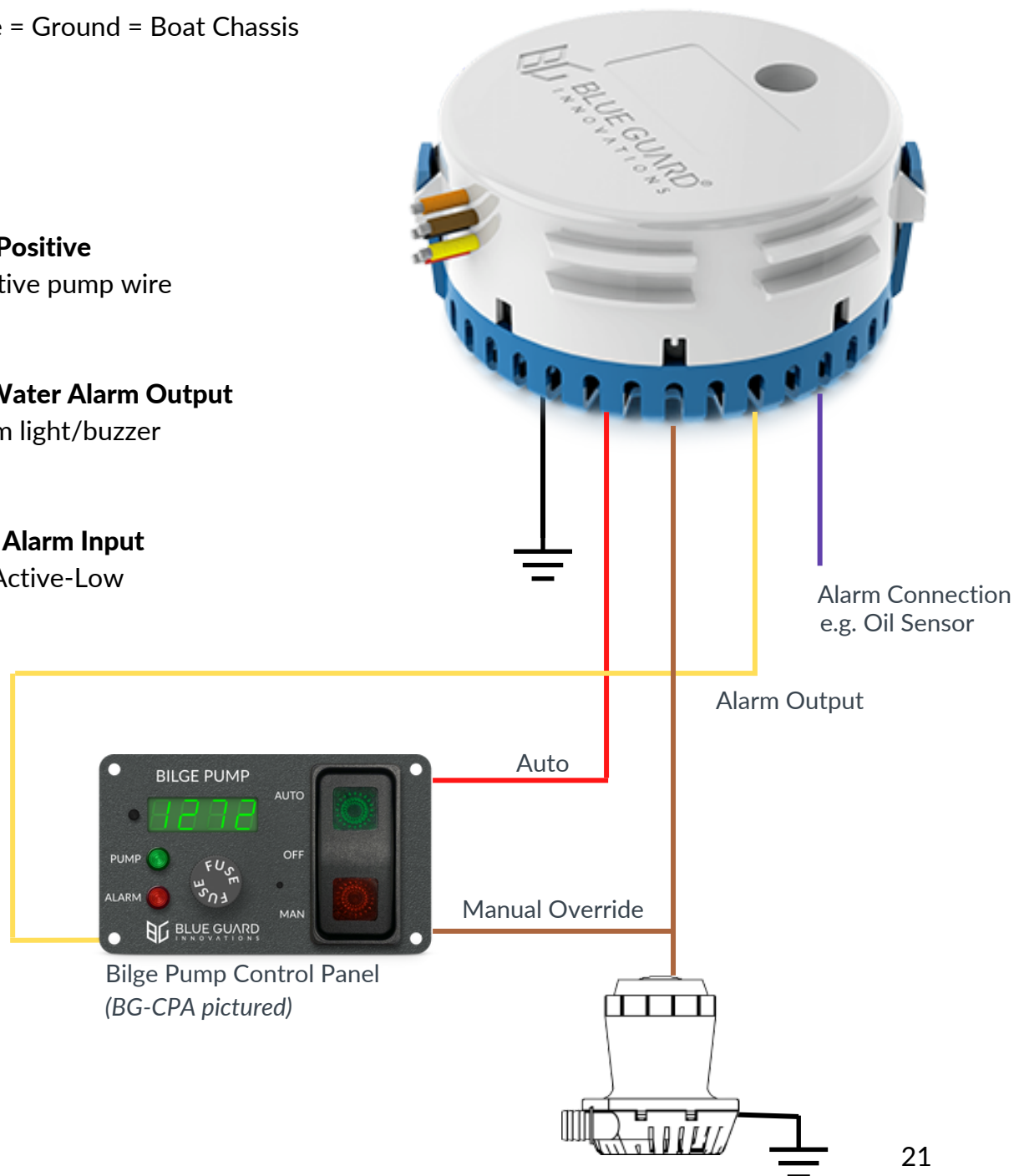**Yellow = High Water Alarm Output**
Connect to alarm light/buzzer
1 Amp Max

Purple = Digital Alarm Input
Active-High or Active-Low
0 – 36 Vdc

Alarm Connection
e.g. Oil Sensor

Alarm Output

Auto

Manual Override

Bilge Pump Control Panel
(BG-CPA pictured)

SM-SWA App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Pump" tile. Input the desired settings for the following categories:

   > **Alarm Run Time:** Alarm for when your bilge pump runs for equal to (or more than) X amount of time.

   > **Activation Alarm:** Alarm for when your bilge pump cycles equal to (or more than) X # of times in an hour.
   > **After Air Run Time:** Determines how long the pump will run after air is detected.
   > **Splash Protection:** Determines the sensitivity to water triggering the bilge sensor.
   > **System Test:** Activates pump output for 10 seconds.

   Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

3. Tap the "Gear" icon in the top right-hand corner of the "High Water" tile and select the desired options and input the necessary information.

   > **Alert:** Enables push notifications, Email, and SMS alerts depending on user preferences.
   > **Latch Mode OFF:** If Latch Mode is 'Off', the alarm stays active only while the sensor detects water; as soon as the sensor stops detecting water, the alarm deactivates
   > **Latch Mode ON:** If Latch Mode is 'On', the alarm stays active even after the sensor stops detecting water and will need to be manually reset.
   > **Alarm Overrun Delay:** How long the sensor needs to continuously sense water before activating the high water alarm.
   > **System Test:** Activates alarm output for 10 seconds.

   Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

   Congratulations, your SM-SWA is set up!

High Water Alarm Sensor (SM-HW)

High Water Alarm Output | Digital Alarm Input

Black = Ground
Supply negative = Ground = Boat Chassis

Red = Power In
9 – 36 Vdc
Use 2 Amp fuse

Yellow = High Water Alarm Output
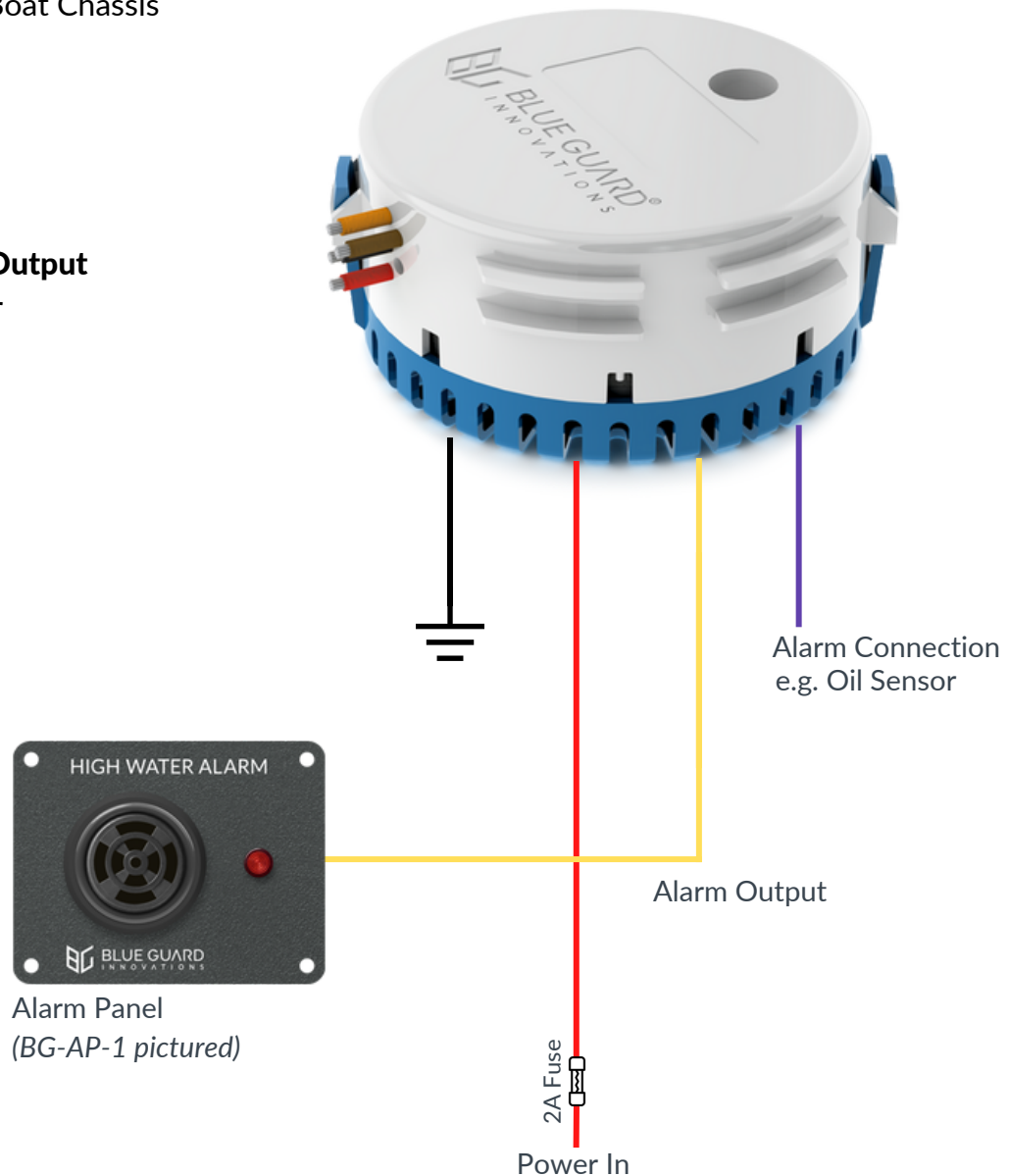Connect to alarm light/buzzer
1 Amp Max

Purple = Digital Alarm Input
Active-High or Active-Low
0 – 36 Vdc

Alarm Connection
e.g. Oil Sensor

Alarm Output

HIGH WATER ALARM

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Alarm Panel
(BG-AP-1 pictured)

2A Fuse

Power In

SM-HW App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "High Water Alarm" tile. Input the desired settings for the following categories:

   > **Alert:** Enables push notifications, email, and SMS alerts depending on user preferences.

   > *Note: Alert preferences can be changed in the user preferences tab*

   > **Latch Mode OFF:** If Latch Mode is 'Off', the alarm stays active only while the sensor detects water; as soon as the sensor stops detecting water, the alarm deactivates.

   > **Latch Mode ON:** If Latch Mode is 'On', the alarm stays active even after the sensor stops detecting water and will need to be manually reset.

   > **System Test:** Activates alarm output for 10 seconds.

   Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

   Congratulations, your High Water Alarm Sensor Mate is set up!

Oil and Fuel Alarm Sensor (SM-OIL)

Oil / Fuel Alarm Output | Digital Alarm Input

Black = Ground
Supply Negative = Ground = Boat Chassis

Red = Power In
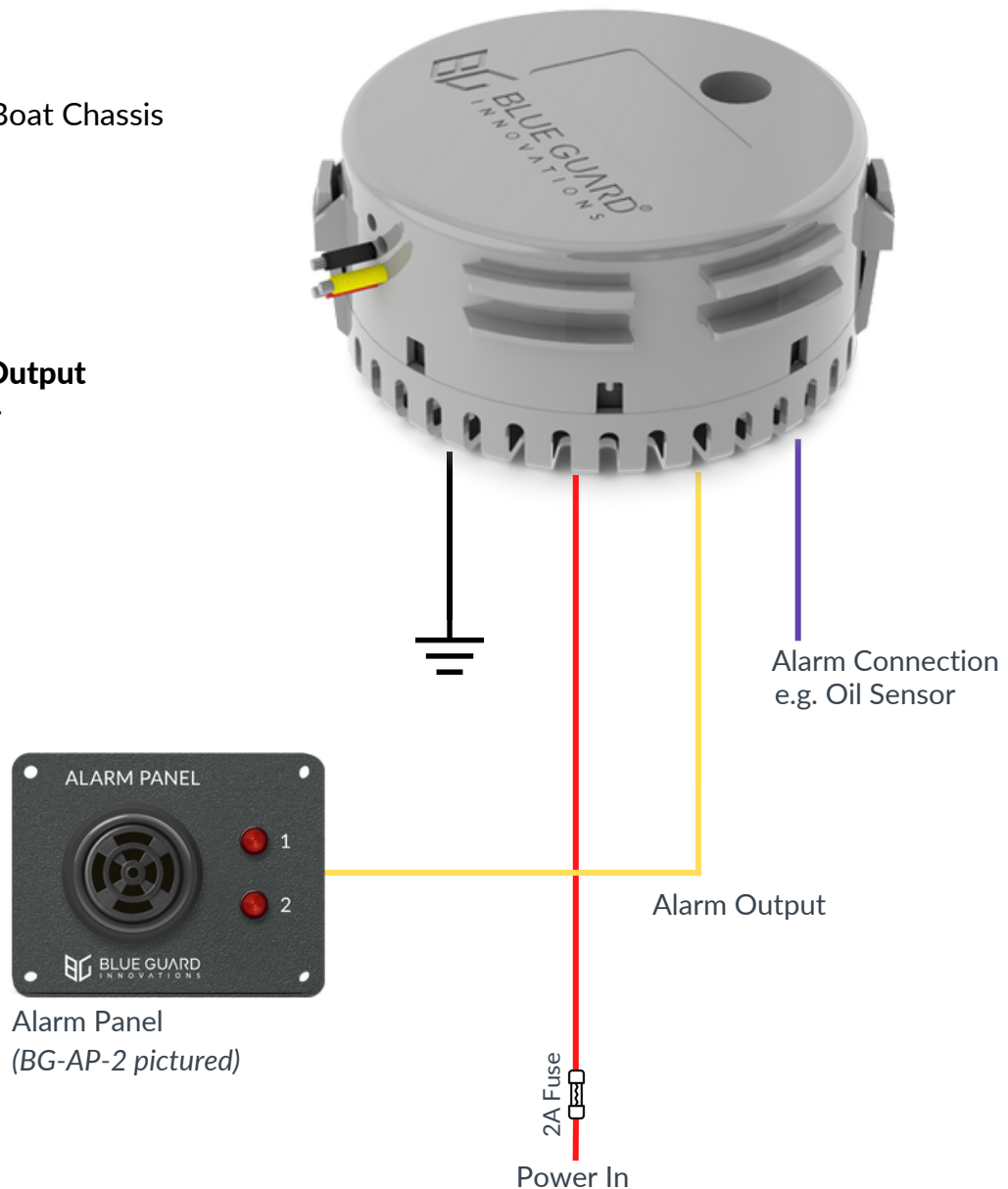9 – 36 Vdc
Use 2 Amp fuse

Yellow = High Water Alarm Output
Connect to alarm light/buzzer
1 Amp Max

Purple = Digital Alarm Input
Active-High or Active-Low
0 – 36 Vdc

Alarm Connection
e.g. Oil Sensor

Alarm Output

ALARM PANEL

1
2

BLUE GUARD
INNOVATIONS

Alarm Panel
(BG-AP-2 pictured)

2A Fuse

Power In

SM-OIL App Setup

1. Once completing Steps 6 and 7 from "Smart Skipper™ App Setup", navigate to the bottom of the Smart Skipper™ App and tap the "Tiles" icon.

2. Tap the "Gear" icon in the top right-hand corner of the "Oil / Fuel Alarm" tile. Input the desired settings for the following categories:

    Alert: Enables push notifications, email, and SMS alerts depending on user preferences.
    Note: Alert preferences can be changed in the user preferences tab

    Latch Mode OFF: If Latch Mode is 'Off', the alarm stays active only while the sensor detects oil/fuel; as soon as the sensor stops detecting oil/fuel, the alarm deactivates.

    Latch Mode ON: If Latch Mode is 'On', the alarm stays active even after the sensor stops detecting oil/fuel and will need to be manually reset.

    Oil/Fuel Detection Sensitivity: Sets the required duration of how long the sensor has to continuously detect oil/fuel before activating the alarm. For more positive oil/fuel detection select lower sensitivity. To detect the smallest amounts of oil/fuel select high sensitivity, but this could result in false detections.
    System Test: Activates alarm output for 10 seconds.

    Once desired configurations are completed, tap the "Save" button to save your configuration and return to the "Tiles" home page.

    Congratulations, your Oil / Fuel Alarm Sensor Mate is set up!