



**NAVI Notify™
NS-RMC747**

**NAVI Notify™
NS-RMC747-E1**

Welcome to NAVI Solutions

The information provided in this is correct as of the publication date and is subject to change without notice. NAVI Solutions, LLC assumes no responsibility for errors or omissions beyond the company's control. Contact NAVI Solutions to verify current product information.

Trademark

NAVI Notify™ is a trademark of NAVI Solutions, LLC.

Copyright

Copyright NAVI Solutions, LLC 2019. All rights reserved. No part of this manual may be reproduced or transmitted in any way without the written permission of NAVI Solutions, LLC.

FCC Requirements

The NS-RMC7XX is classified under FCC regulations as a Class A device for use in commercial environments. This device has been tested and complies with FCC rule: Part 15 Subpart J. To maintain low EMI levels, we suggest that you use only metal connectors and shielded cable grounded to the frame. Specifications are subject to change without notice.

Order from: **C A Briggs Company**
622 Mary Street; Suite 101; Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118
Sales@cabriggs.com - www.cabriggs.com

About This Guide

This Installation & Setup Guide provides the instructions and recommendations necessary to install and configure your NAVI Notify™ Cellular Pumping System Alarm. Please read it thoroughly, follow the safety recommendations, and retain it as a reference.

Contents

SECTION 1	PAGE	SECTION 2	PAGE
NAVI Notify™ Overview	3	Configuration - Web Interface Reference	12
Cautions and Safety	4	Accessing the UI and Logging In	12
Installation	5	Password Reset	12
RMC747 and RMC700	5	Using the status Page	12
Unit Mounting	5	The Device List	12
Ground Connection	5	The Inputs List	14
Power Connection	5	The Analogs Display	14
RMC747-E1 and RMC700-E1	6	Configuring Inputs, Devices, analogs, and Notifications	15
Enclosure Mounting	6	Step 1: Add and Configure Dry-Contact Inputs	15
Ground Connection	6	Step 2: Add a New Device	16
Power Connection	6	Step 3: Add and Configure an Analog	16
Sensor and Transducer Connection	8	Step 4: Configuring Email and Text Notifications	17
Wireless signal Strength	8	Other NAVI UI features	18
Product Warranty	9	Using History Displays	18
Use of Wireless Equipment	9	Network Page	18
Warranty Replacement & Repair	10	Settings Page	19
Customer Support	10	Editing Configurations	19
Technical Specifications	11	Logout	19

Congratulations on your purchase of NAVI Solutions' Notify™ Pumping System Alarm. Pumping Systems are essential to the operation of all commercial, industrial, and municipal facilities. Pumping Systems provide the flow and pressure necessary serve people and processes with water, comfort, fuel, and sanitation. Pumps keep people working and the environment safe. When Pumping Systems fail, Notify™ minimizes downtime and its consequences. Notify™ ensures you'll always be the first to know.

NAVI Notify™ is built on 25 years of pumping systems and industrial controls experience. Notify™ is a network edge processor designed to monitor dry contact (bi-state, digital, or switch) type sensors and analog transducers to detect change of state or out of limits conditions related to pump operating conditions. Alarm notifications are transmitted over a pre-activated, private wireless, 4G LTE cellular IP data network to a cloud services platform. Alarm messages are matched with location, alarm description, and message recipient information entered in the Notify™ processor during configuration. Out-going alarm messages are delivered to mobile devices via SMS text or email.

Pumping system sensors typically monitor suction and discharge pressure, flow, temperature, vibration, and power. When any of these metrics vary beyond specified operating limits, the pumping system is not performing its specific function, providing controlled flow and pressure to the rest of the system. The sensor then opens or closes contacts, or varies voltage or current in the case of analog devices.

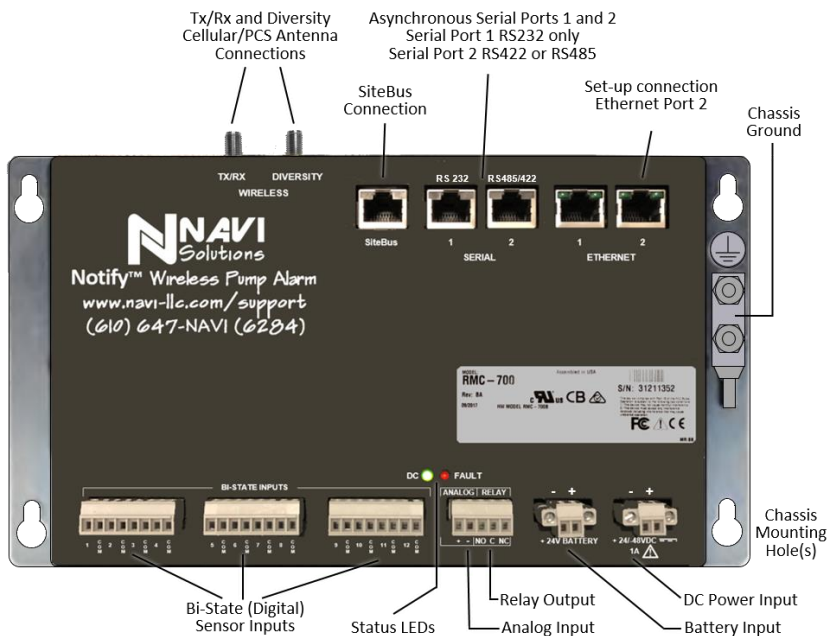
Dry contact sensors can be any of a variety of devices; pressure, flow, temperature and level sensors, motor temperature and vibration monitors, VFD fault indicators, or control panel fault and power contactor relays.



SECTION 1 – Notify™ Installation Guide

NAVI Notify™ Overview

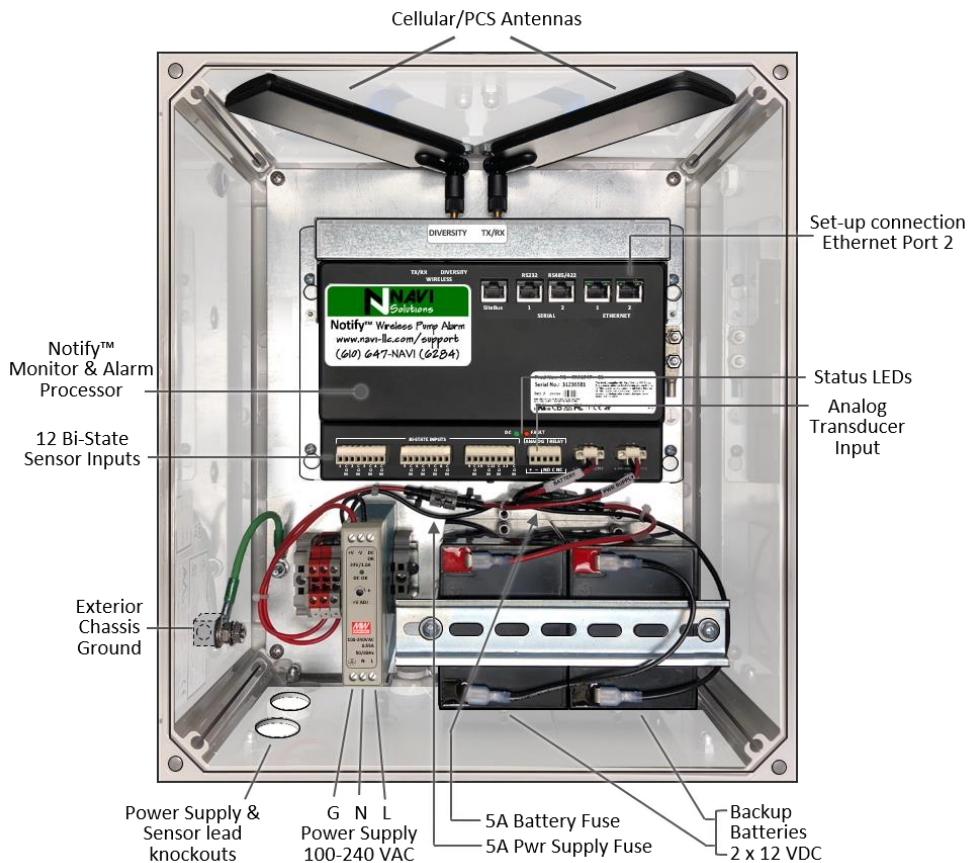
NAVI Notify™ NS-RMC747



Standalone Processor requires nominal +24 VDC input power (20 – 60 VDC) be supplied.

SiteBus, Asynchronous Serial Ports, Ethernet Port 1, and the Relay Output Port are intended for future use.

NAVI Notify™ NS-RMC747-E1



Status LEDs

DC

DC input power LED:

- Illuminated when valid DC input power is applied to the Notify™ unit.

FLT

Hardware Failure LED:

- Steady when processor is not functioning
- Blinks when software is loading
- Goes out when software load is complete and unit is operating normally

Cautions and Safety

Your NAVI Notify™ Cellular Pumping System Alarm has been designed to provide safe, reliable monitoring. However, installing any electronic device requires certain precautions be taken to prevent damage or injury.

Grounding and Electrical Safety



CAUTION: Notify should only be installed by qualified personnel. If your staff is not qualified for electrical work it is recommended that the services of a licensed electrician are engaged.

During installation please read and observe all additional Cautions and Warnings in the Installation Section required for safe installation.

For Notify™ equipment to operate safely and correctly, there must be a safety ground connection between the equipment ground bolts and the equipment or earth ground.

Installation



CAUTION: If you are installing a Notify™ RMC7XX-E1 unit in an enclosure, the unit operates on 120 VAC to 240 VAC single-phase power. If the unit is supplied power from a 3-phase control panel, ensure it is connected to one-leg and neutral only.

If the Notify™ unit is connected to building power, it is recommended that a separate circuit and circuit breaker be used rather than wall outlets or circuits supplying other equipment.

Disconnect the Notify™ from the power source anytime sensor wiring is being connected.

Restricted Access Locations



CAUTION: Do not connect the Notify™ unit to any wiring, power or sensors that will interfere with the passage of personnel or the maintenance of equipment.

Ensure the Notify™ enclosure has sufficient circulation and is not installed closely adjacent to heat sources.

Although the NAVI Notify™ E1 unit is delivered in a NEMA 4X enclosure, protect the interior of the unit from splashed or sprayed fluids and ensure the front cover is securely closed. Do not operate with the enclosure cover open.

Battery charging



CAUTION: The Notify™ RMC7XX supports a wide range of power input from 20 to 60 VDC. When using the battery input, ensure the battery configuration (typically 24 or 48 volts) matches the input power and polarity of the unit.

Installation

NAVI Notify™ stand-alone Alarm Processors and Wireless Pumping System Alarms can be installed in a variety of locations.

- The NAVI Notify™ NS-RMC747 and NS-RMC700 stand-alone Alarm Processors are delivered as alarm processor units only. These units are designed to be wall mounted in dry interior spaces or within other control equipment enclosures where sufficient space is available. The NS-RMC700 is an Ethernet only system provided where Ethernet connectivity is preferred. Both units require + or - 20 to 60 VDC to be supplied.
- The NAVI Notify™ NS-RMC747-E1 (enclosure) Wireless Pumping System Alarm is delivered as an integrated system in a NEMA 4X enclosure with power supply and battery backup. The unit is designed to be installed in either exterior or interior spaces, wall or Unistrut rail mounted. The installed power supply will accept 100 to 240 VAC from single phase building power or can be wired 1 leg to ground if supplied from a 3 phase supply powering the monitored pump system. As with the processor only installation, the NS-RMC700-E1 is an Ethernet only system used where Ethernet connectivity is preferred.

Mounting the Notify™ NS-RMC747 and 700 Alarm Processor Unit

The Notify™ RMC7XX Alarm Processor mounting location should be selected to ensure that power and sensor wiring will not interfere with the passage of personnel or the maintenance of equipment. Ensure the unit has sufficient air circulation and is not installed near any heat sources. The unit should be mounted to a firm, flat, vertical interior surface protected from splashed or sprayed liquids.

Mount the RMC7XX by marking the 4 screw slots or using the mounting dimensions on the following page (9-3/8" w x 4-3/8" h). Use screws sufficient to fit the mounting holes and screw slots at the corners of the unit (typically #8 or #10 screws). Ensure the screws are sufficiently well anchored or backed with washers and nuts if panel mounting.

Connect the Chassis Ground

Connect the unit chassis ground to a suitable frame ground or reliable earth ground using 14 AWG copper conductor wiring.



CAUTION: The chassis ground must be connected to the same earthing electrode (ground) conductor as the DC power supply system, i.e. the chassis and DC power source cannot be earthed separately. No disconnecting devices can occur in the ground source wiring or conductor. Chassis ground must be connected prior to connecting the power source.

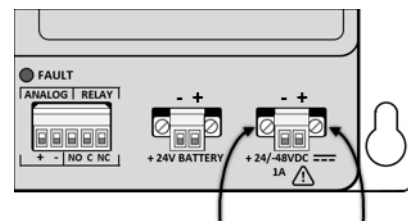
Connect the Unit Power Source



CAUTION: Turn off the power feed before connecting power to the unit. Power supply wiring must be connected to a suitable disconnect device and 3A fuse in the 16 AWG supply wiring. Ensure polarity is observed when connecting power.

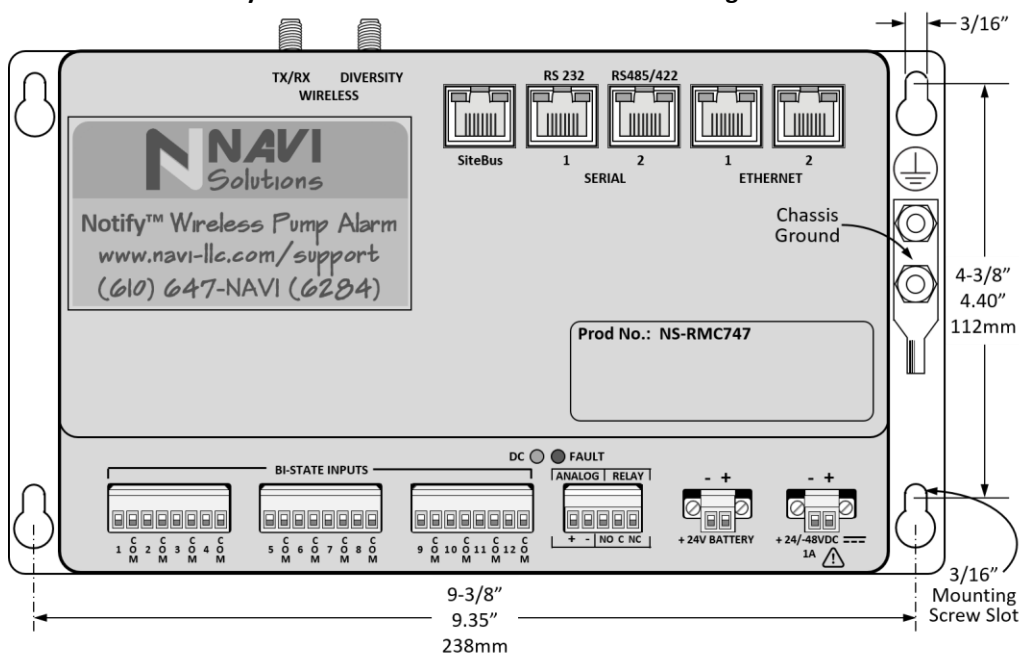
The stand-alone RMC7XX Alarm Processor is powered by +/- 20 VDC to 60 VDC power. Ensure the power source is turned off. Ensure the power source and the chassis are connected to the same ground source. Ensure a disconnect device and 3A fuse are installed in 16 AWG power supply wiring.

Remove the 2 retaining screws in the modular power connector. Securely connect the power supply wiring to the modular connector observing the proper polarity. Replace the modular connector and retaining screws. Connect the source power. The green DC indicator LED will illuminate and the red FAULT LED will blink until the software load completes and then go out.



Unscrew 2 screws to remove the modular power connector.

RMC7XX Notify™ Alarm Processor – front view – Mounting Dimensions



Mounting the Notify™ NS-RMC747-E1 and NS-RMC700-E1 Pumping System Alarm Enclosure

The Notify™ RMC747-E1 and RMC700-E1 Pumping System Alarms are delivered in NEMA 4X enclosures with AC power supplies and battery backup suitable for interior or exterior installation. The mounting location should be selected to ensure that power and sensor wiring will not interfere with the passage of personnel or the maintenance of equipment. Ensure the enclosure has sufficient air circulation and is not installed near any heat sources. Although the enclosure is NEMA 4X certified, it should be protected from liquids sprayed under pressure.

It is strongly recommended that the enclosure be mounted using the brackets provided rather than the enclosure mounting screws directly. The assembled enclosure weighs approximately 20 lbs. and should be mounted to a firm, flat, vertical surface or appropriate equipment racking bolted through the 1/2" mounting holes in the mounting brackets.

Mount the RMC7XX-E1 enclosure using the mounting bracket dimensions on the following page (12-5/8"w x 10-3/8"h) using screws, anchors, or bolts sufficient to securely mount the enclosure and carry its weight (approx.. 20 lbs.). Ensure the fasteners are sufficiently backed with washers and nuts if panel or rack mounting.

Connect the Chassis Ground

Connect the exterior chassis ground block to a suitable frame ground or reliable earth ground using a 14 AWG copper conductor.



CAUTION: The chassis ground must be connected to the same earthing electrode (ground) conductor as the DC power supply system, i.e. the chassis and DC power source cannot be earthed separately. No disconnecting devices can occur in the ground source wiring or conductor. Chassis ground must be connected prior to connecting the power source.

Connect the Enclosure Power Source



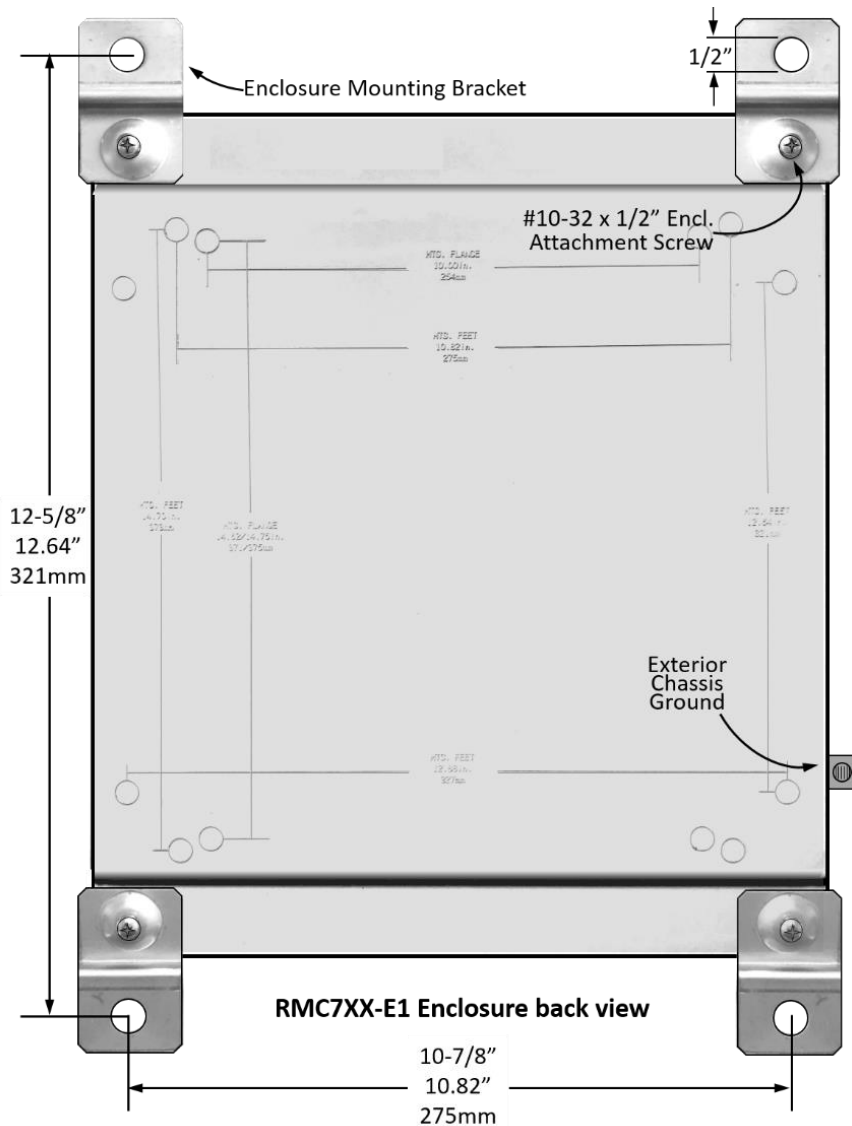
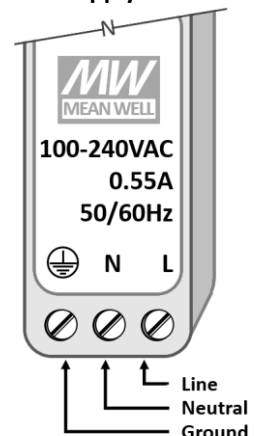
CAUTION: Turn off the power feed before connecting power to the power supply. Power supply wiring must be connected to a suitable disconnect device and 3A fuse in the 16 AWG line leg of the supply wiring. Ensure correct Line, Neutral, and Ground connections are made. Make sure all wiring arrangements and connections meet all local electrical codes.

The RMC7XX-E1 Pumping System Alarm power supply will accept AC voltage from 100 VAC to 240 VAC. If a 3 phase power source is used, disconnect the source power then make the line (L) connection to one leg of the 3 phase power source and make the neutral (N) connection to the ground source at the power source using 16 AWG wire.

Feed the power source wiring through one of the enclosure knockouts using a water-tight cable clamp. Using a long shaft standard screwdriver release the base of the power supply retainer from the DIN rail mount. Feed the Line, Neutral, and Ground wires into the appropriate connectors at the bottom of the power supply and tighten the screws securely. Reinstall the power supply by snapping the retainer into place on the DIN rail mount. Insert the 5A battery fuse and 5A power supply fuse.

Reconnect the source power. The green DC indicator LED on the alarm processor will illuminate and the red FAULT LED will blink until the software load completes.

Power Supply Connections



Sensor and Transducer Connections

The NAVI Notify™ Pumping System Alarm and stand-alone Alarm Processor will accept any dry contact, digital, switch-type or bi-state sensor input or any analog transducer input operating at 0 to 10 VDC or 4 to 20 mA DC. Install sensors and transducers according to the manufacturer's recommendations. If the sensors are connected to an RMC7XX-E1 enclosure unit, feed the sensor leads through one of the knockouts in the bottom of the enclosure using a water-tight cabling device. RMC7XX standalone Alarm Processors can be wired directly.

Remove the modular bi-state input connector and connect one lead to a numbered input port and the other to a common ground (COM) port. Secure each connection with its port set screw. Ensure the input leads are not in tension and secured appropriately with cable ties or conduit. Similarly, install the analog transducer leads ensuring required polarity is maintained.

See Section 2, Web Interface User Guide, for device, alarm, and notification configuration steps.

Wireless Signal Strength

The NAVI Notify™ Wireless Pumping System Alarm and stand-alone Wireless Alarm Processor operate over a 4G LTE cell data Virtual Private Network connecting the Alarm Processor to a cloud server where alarm messages are processed and notifications sent. Because they are data connected rather than operating over the cellular voice frequencies, the units operate well even in locations with marginal signal strength. Before installation, check the cellular signal strength at the intended installation location. In the event the location has no detectible cell service level, contact NAVI Solutions to discuss remote antenna and Ethernet options.

Notify™ Input Configuration & Set-up

See the NAVI Notify™ Quick Start guide and also the Web Interface Reference in Section 2.

1 Year Limited Warranty

This 1 Year Limited Warranty is provided by NAVI Solutions, LLC (“NAVI”) to the original first installation Customer (“Customer”) of NAVI’s Products. Both NAVI and Customer agree that the Warranty terms to follow define the obligations and responsibilities of both parties. Customer acknowledges that installation of NAVI’s Products confirms acceptance of the Warranty terms and the End User Agreement below.

Please read this warranty and all instructions in the product installation guide before installing NAVI Products. Customer should determine prior to installation whether the product is suitable, adequate and safe for purchaser’s intended use. Specific applications and installation requirements vary greatly. NAVI Solutions, LLC makes no representation or warranty as to suitability or fitness of these devices for any specific application. Customer will ensure the Products are installed by qualified personnel or will engage the services of a licensed electrician. NAVI Solutions, LLC does not warrant or provide remedies for products not supplied by NAVI.

Unless otherwise specified by NAVI, all deliveries will be FOB at the point of shipment. Customer is responsible for inspecting Products upon delivery for any damage occurring in transit. Customer will make any and all damage claims with the carrier.

NAVI warrants the Product delivered to Customer to be free from defects in materials and workmanship for the lesser period of 12 months from the date of installation or 18 months from the date of purchase. In the event the product fails to conform to the specifications or to the terms of this warranty at any time during the warranty period, NAVI will, at its sole option, repair or replace the product at no charge to the Customer. This Limited Warranty is provided to the original purchaser and/or installation of record only and will not be in effect if the product is damaged, modified, improperly installed, serviced by unauthorized personnel, or used in an unintended manner.

NAVI’s obligation under this Limited Warranty is strictly limited to repairing or replacing the Product at NAVI’s sole option. IN NO EVENT WILL NAVI BE RESPONSIBLE FOR ANY INJURY, LOSS OR DAMAGE, NOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES. NAVI, nor the installation of NAVI’s Products by Customer, in no way guarantees Products will perform in Customer’s environment or that alarm messages will be delivered. Nor is NAVI in any way providing any insurance, guarantee, or compensation for property or business losses arising out of use of NAVI’s Products.

Any product not conforming to the terms of this Limited Warranty should be returned, securely packaged, insured and freight prepaid to NAVI according to the RMA Procedure under the Customer Assistance section. Please include a copy of Customer sales receipt, unit serial number, and a detailed description of the problem experienced. Warranty claims must be made to NAVI within twelve (12) months of the occurrence of the cause of claim. This Limited Warranty excludes any costs related to removal and/or installation of Products.

EXCEPT FOR THE WARRANTIES EXPRESSLY PROVIDED FOR IN THIS AGREEMENT, BOTH PARTIES DISCLAIM ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. This warranty Agreement is governed by the laws of the Commonwealth of Pennsylvania, USA.

End User Agreement – Use of Wireless Equipment

Wireless NAVI Notify™ devices, NS-RMC747 and NS-RMC747-E1 are subject to the following Cellular Carrier Service restrictions:

Use of Service for Remote Medical Monitoring/Unmanned Aerial Vehicles (“UAV”) Prohibited: Customer shall not use the Service for remote medical monitoring, or UAV. Fraudulent or Unauthorized Use: Customer shall not use the service for any fraudulent or other unauthorized use of the services or mobile telephone number.

Equipment Location: All Equipment activated on M2M Lines at a fixed location must be located by Customer within the areas served by the Verizon Wireless owned and operated network. Customers without adequate Verizon Wireless coverage must provide internet connectivity via other means.

Location Based Services: Customer acknowledges that NAVI and its affiliates may have access to information about the location of wireless-equipped Equipment. Use of this location data, if any, may include analysis of service quality, statistical reporting, or functional enhancements to the service. In no circumstances will customer data, including location information, be distributed without Customer’s prior written consent. Customer may explicitly disable location reporting on their Equipment and request that any location history be destroyed with the assistance of technical support.

Termination of service for wireless equipped Product: To ensure compliance with carrier requirements, when Customer terminates service, Customer shall either permanently power off or remove the provided SIM card from the Product.

Before obtaining access to or using the wireless service, Customer agrees to the following: CUSTOMER EXPRESSLY UNDERSTANDS AND AGREES THAT IT HAS NO CONTRACTUAL RELATIONSHIP WHATSOEVER WITH THE UNDERLYING WIRELESS SERVICE PROVIDER OR ITS AFFILIATES OR CONTRACTORS AND THAT CUSTOMER IS NOT A THIRD PARTY BENEFICIARY OF ANY AGREEMENT BETWEEN NAVI AND ITS AFFILIATES AND THE UNDERLYING CARRIER. CUSTOMER HEREBY WAIVES ANY AND ALL CLAIMS OR DEMANDS THEREFOR.

Warranty Returns and Repairs

Limitation of Damages and Action: Repair or replacement, as specified below, shall be NAVI Solutions' sole obligation under this Warranty. NAVI's liability shall be limited to its invoiced price for the goods, net of any discounts (payment of otherwise) or rebates. In no event shall NAVI be liable to Customer or any other person for any incidental, consequential or special damages resulting from the use of or inability to use the products covered hereby, whether arising from breach of warranty, negligence, or strict liability or otherwise, or for any labor charges, other expense, loss or damages caused by defective merchandise. Any warranty action must be commenced within one (1) year of cause of action. During the Warranty Period, NAVI, at its discretion, may (a) repair or (b) replace returned product with a functionally equivalent unit.

Warranty Exclusions:

- Product received damaged due to, but not limited to; improper use, packaging, installation or decommission.
- Product that has been refurbished, modified, or changed by the customer without written authorization.
- Product damaged due to Force Majeure.

All product that falls under the Warranty Exclusions listed above will be void of Warranty and Customer will be billed and liable for all associated repair and transportation charges as provided below under "Out of Warranty Repair." Repaired or replaced units shall be warranted for the balance of the original Warranty Period, or 90 days, whichever is longer. Warranty returns determined as "No Fault Found" will be subject to an evaluation fee.

Out of Warranty Repair: Customer will be billed for all associated repair costs related to Out-of-Warranty repairs. Products returned for out of warranty repair will be warranted for 90 days from the shipment of the returned Product to the Customer. Customer is responsible for inbound and outbound freight charges on out of warranty repairs. Out of warranty repairs found to be uneconomical to repair or unable to be repaired will be subject to an unrepairable product fee.

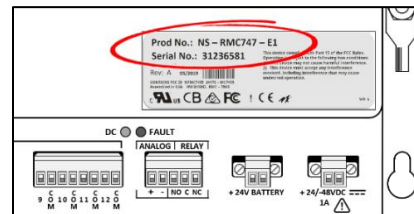
Out of Box Replacements: NAVI will make best efforts to ship replacements to the Customer's installation site within 24 hours of the Customer's request for replacement. All out of box warranty replacements will be shipped from reconditioned inventory. All out of box warranty replacement shipments will be prepaid at NAVI's expense. However, Customer will be required to provide a PO at the time of the Out of Box Advance Replacement request. Customer will be billed list price of the material shipped if the returned unit is not received within thirty (30) days of the replacement shipment date or if it is received and found to be out of warranty.

Credit Returns: At NAVI's discretion, Products may be eligible for return for credit. Customer should contact NAVI's Customer Service department to request a return for credit RMA. A restocking fee will be applied to all product returned for credit. Credit will be issued after review and approval of the product return.

Requesting a Return Material Authorization (RMA): All product returned to NAVI must reference an RMA number.

To request an RMA please contact NAVI Customer Service with the following information:

- Company Name, Sold to, and Ship to
- Contact Name, phone number, and email
- NAVI Part and Serial numbers for failed product
- Description of suspected failure/issue seen
- Purchase order number



RMAs will be valid for 30 days from the date of issue. Return product must be received by NAVI within 30 days.

Returning product after an RMA has been issued: All products returned to NAVI must reference the RMA issued for the serial numbers being returned. NAVI will not be held liable for any product returned without an RMA and reserves the right to refuse such receipts. At the time of RMA issue, Customer will be provided with return shipment instructions. NAVI reserves the right to refuse returns that are damaged in transit.

Customer Support

NAVI Solutions' Contacts:

- For quoting, order status and general inquiries please contact: sales@navi-llc.com
- For technical support please contact Support@navi-llc.com
- To speak to a NAVI representative, please call (610) 647-NAVI (6284)
- Hours of Operation: Monday – Friday 8:30 AM – 5:30 PM Eastern Time

Order from: **C A Briggs Company**

622 Mary Street; Suite 101; Warminster, PA 18974

Phone: 267-673-8117 - Fax: 267-673-8118

Sales@cabriggs.com - www.cabriggs.com

Technical Specifications

Specification	Description
Weight RMC7XX Alarm Processor RMC7XX-E1 Pumping System Alarm	1.6 lb. (0.73 kg) 20 lb. (9.1 kg including enclosure, processor, power supply, and batteries)
Size RMC7XX Alarm Processor RMC7XX-E1 Enclosure	Height: 5.6 in. (14.2 cm) x Width: 9.95 in. (25.3 cm) x Depth: 0.92 in. (2.3 cm) Height: 14.5 in. (36.8 cm) x Width: 12.75 in. (32.4 cm) x Depth: 7.12 in. (18.0 cm)
Mounting RMC7XX Alarm Processor RMC7XX-E1 Enclosure	Wall mount or cabinet mount Wall mount or rack mount
Operating Environment (Ambient)	Temperature: -40° to 65°C Relative Humidity: 0% to 95% (non-condensing)
Power RMC7XX Alarm Processor RMC7XX-E1 Enclosure	Input Power: 5 watts minimum, 12 wats maximum Input Voltage Range: +/- 20 to 60VDC Input Voltage Range: 100 to 240VAC
Fuse Ratings	0.5 A at 60 VDC
Input/Output Ports	2 10/100 BaseT Ethernet switch ports 1 RS232 asynchronous serial port 1 RS485/RS422 asynchronous serial port 1 SiteBus, One Wire Interface <ul style="list-style-type: none"> • Up to 12 One Wire sensors 12 Digital inputs, pre-wetted with common ground 1 Analog input: <ul style="list-style-type: none"> • Voltage mode: Range: +/- 0 to 10 VDC Input impedance: greater than or equal to 400K Ohms • Current mode: Range: 4 to 20 mA DC Input impedance: 100 Ohms • Accuracy: +/-2% of full scale 1 Relay output: Contact rating: 30 VDC at 2 A resistive Contact type: Form C



SECTION 2 - Web Interface User Reference

Configuring Devices, Alarms & Notifications

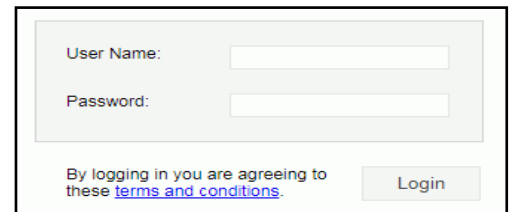
Next Page

Welcome to the NAVI Solutions Web Interface User Guide. This User Guide explains how to use this online User Interface (called the UI from here on).

The UI works with sensors, specialized electronics, and software to remotely monitor pumps and other pumping system devices. Monitored devices have dry-contact or analog sensors which transmit alarm conditions from the device to the UI. When this system is set up correctly, a glance at the UI will show whether the monitored devices have issued any alarms (“Pump has failed,” for example). Each alarm is explained with a short message and a severity color code. This same information can be monitored on a mobile device or automatically texted or emailed to designated person(s).

Accessing the UI and Logging In

1. Use an Ethernet cable to connect a PC or laptop configured for DHCP to Ethernet Port 2 of the NS-RMC700 or NS-RMC747 device.
2. Open an internet browser on the PC or laptop. Enter `https://192.168.1.1`.
3. NAVI Notify will appear on the browser tab and login fields (shown at right) will open.
4. For your first login, enter the default user name “**admin**” and the default password “**password**” in the fields provided, then click the **Login** button (or press Enter on your keyboard). The Status page will open.



User Name:

Password:

By logging in you are agreeing to these [terms and conditions](#).

Login

IMPORTANT: When you access the web interface using HTTPS the first time, an error page might appear saying there is a problem with the security certificate. Click **Continue to this web site** to accept the security certificate and continue with the acceptance options as prompted.

Reset Your Password After First Login

After your first login, reset your Password for future logins. Do this by clicking **Settings** in the navigation pane to open the Settings page. Click the pencil (edit) icon to the right of the Password field. The **Edit Password** window will pop up. Enter your new password, make a note of it, and click Save. Your new password takes effect immediately.

Using the Status Page

The Status Page shown in Figure 1 on Page 2 opens upon login. It is designed to show the status of alarms coming from the system’s monitored devices, and to provide easy access to tools used to adjust settings. Most of the work you do with the NAVI UI will start on the Status Page. Monitored devices, dry-contact inputs, and one analog input are all shown on the UI, along with the current status and messages for all alarms. The Status page also has tools to add, adjust, or delete devices, inputs, and analogs and all of their settings.

The Status Page has three displays (not counting the navigation pane, which can be hidden). From top to bottom, those are the Devices display, the Inputs display, and the Analogs display. Each of the displays shares common features, including color-coded icons showing alarm severity, device/source names and other basic information, and clickable icons to access settings and/or history or delete a display item.

The Devices List

The Devices list shows all devices which have been set up in the system. A “Device” is a piece of equipment -- a pump, a tank, or a valve, for example -- that is being monitored by the NAVI system. Figure 2 provides a key to the Devices list.

Each time a new device is added it appears in this alphabetized list. The device name, type, and location are added by the UI user when the device is created. The color-coded status icons left of each device name show the severity of the most severe alarm active among that device’s sensors. Green means normal; red means a critical alarm (refer to the color key in Figure 1).

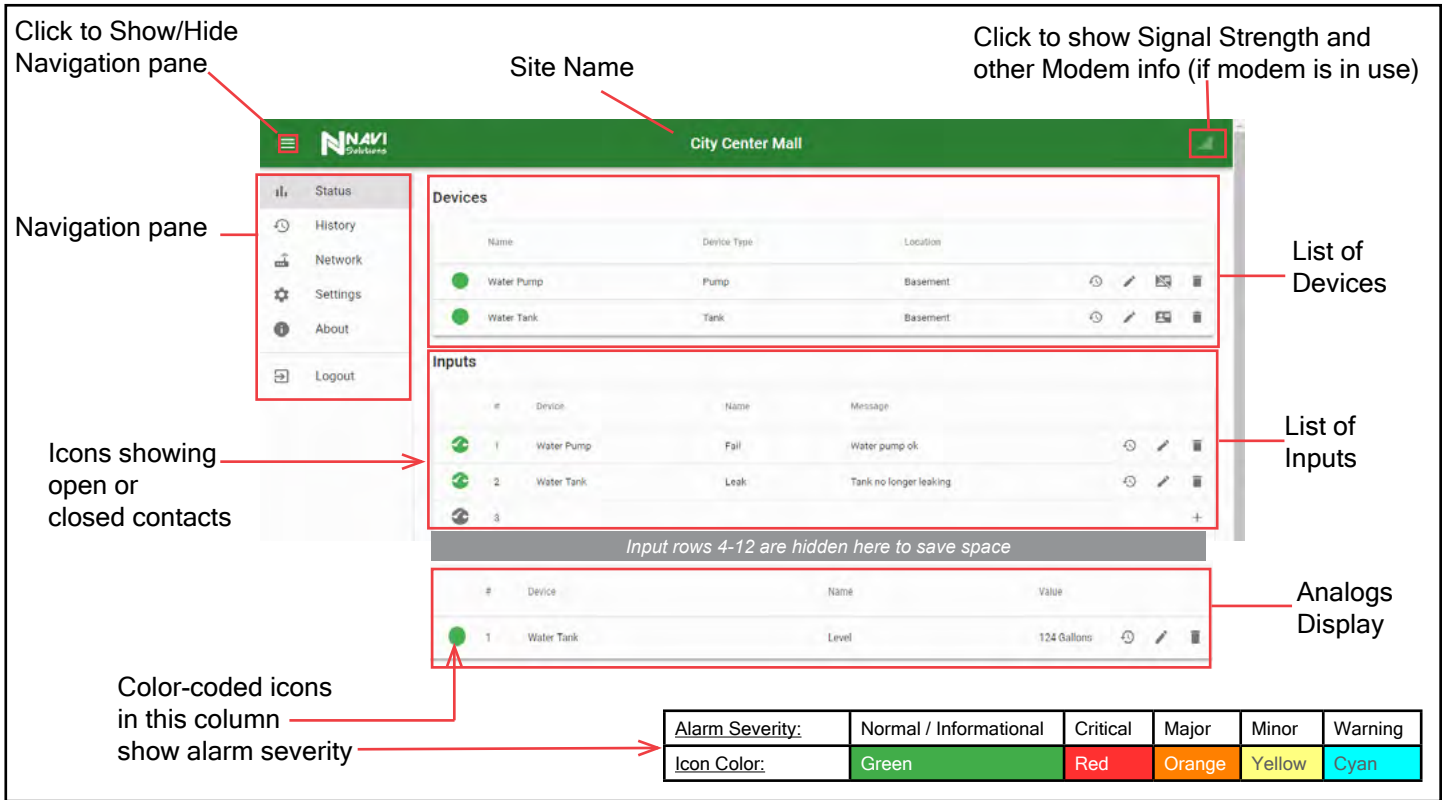


Figure 1: Status page

On the right side of each Device row are four clickable icons:

- The History icon (resembles a clock) opens the History of recent alarms and events for that Device
- The Edit icon (resembles a pencil) opens Device settings. The only editable setting in this version of NAVI Notify is the location.
- The Contacts icon (resembles a person and an envelope) opens that Device’s Contacts dialog box, where the user can add, edit, or delete email addresses and phone numbers of parties receiving alarm notifications. This icon appears with a diagonal slash when no contacts have been added.
- The Delete (trash can) icon, which the user clicks to delete a Device.

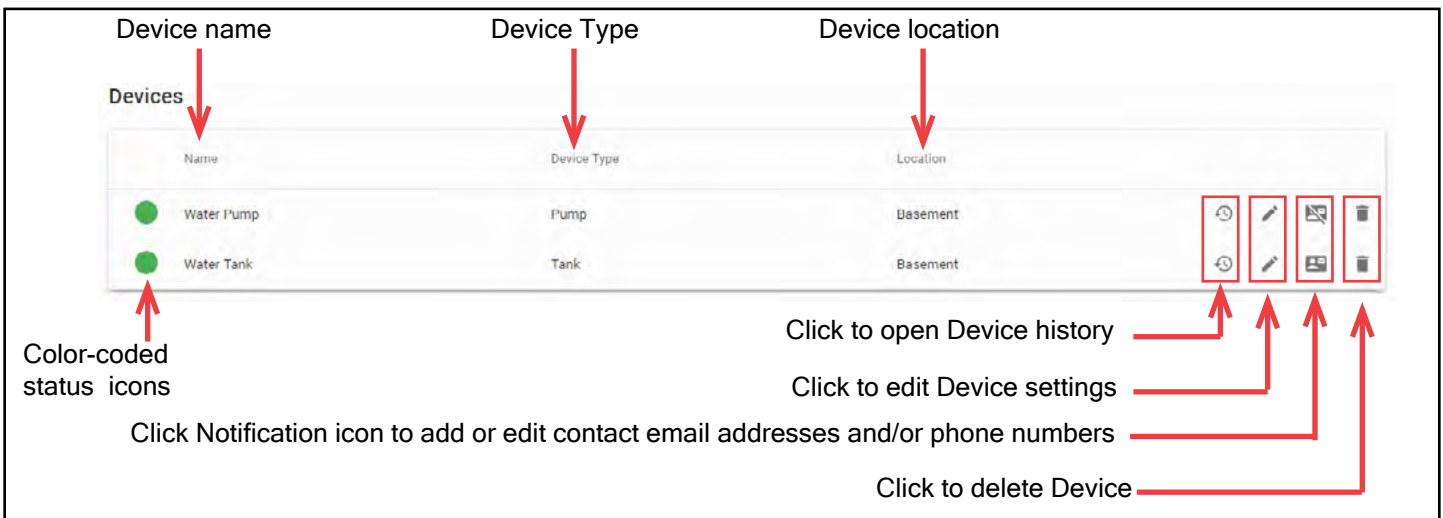


Figure 2: Device List Features

The Inputs List

The Inputs List shows the dry contact digital sensors connected to the NAVI system. It also provides the starting point to add new Devices or additional Inputs to existing Devices so they appear in the UI. Figure 3 below shows the top of the Inputs list.

Input number	Device name	Alarm name	Alarm message	History, Edit, and Delete icons
#	Device	Name	Message	
1	Water Pump	Fail	Water pump ok	[History] [Edit] [Delete]
2	Water Tank	Leak	Tank no longer leaking	[History] [Edit] [Delete]
3				[+]

Input icons show alarm severity and dry contact's open/closed state.
Examples:

- Contact closed + critical alarm
- Contact open + normal
- (Gray) No input assigned

Click to add Device or Input

Figure 3: Inputs List

The device name, alarm name, and alarm message are added by the UI user when the Input is configured. The color-coded status icons left of each device name show both the severity of the alarm from that device's sensor and whether the dry contact circuit is open or closed (refer to the input icons key in Figure 3).

On the right side of each Input row are clickable History, Edit, and Delete icons. These function the same as those in the Devices list except they operate on that Input only.

The Inputs list always displays 12 rows, reflecting the NAVI Solutions capacity for 12 dry contact inputs. Unassigned rows have gray input icons and no names or messages and a plus icon on the right. The user clicks that plus icon to start the process of adding the Input to a new or existing Device.

The Analogs Display

The Analogs display at the bottom of the Status Page lists the single Analog input if one has been configured. See Figure 4 below.

The Analogs display includes a color-coded icon, the device name, the analog measurement name and value, and History, Edit, and Delete icons. If no Analog has been configured, the icon is gray and the row is otherwise blank except for a plus icon on the right side. Click the plus icon to configure the Analog input.

Device name	Analog Measurement Name	Measurement value
#	Device	Name
1	Water tank	Level
		124 Gallons
		[History] [Edit] [Delete]

Color-coded analog icon

History, Edit, and Delete icons

Figure 4: Analogs Display

Configuring Inputs, Devices, Analogs, and Notifications

The following section describes the steps to configure the UI to monitor pumping system alarms.

Step 1: Add and Configure Dry-Contact Inputs

To add a dry contact input, first click the plus sign at the right side of a row in the Inputs display. Then follow the steps shown in Figure 5 to open the Input Setup box.

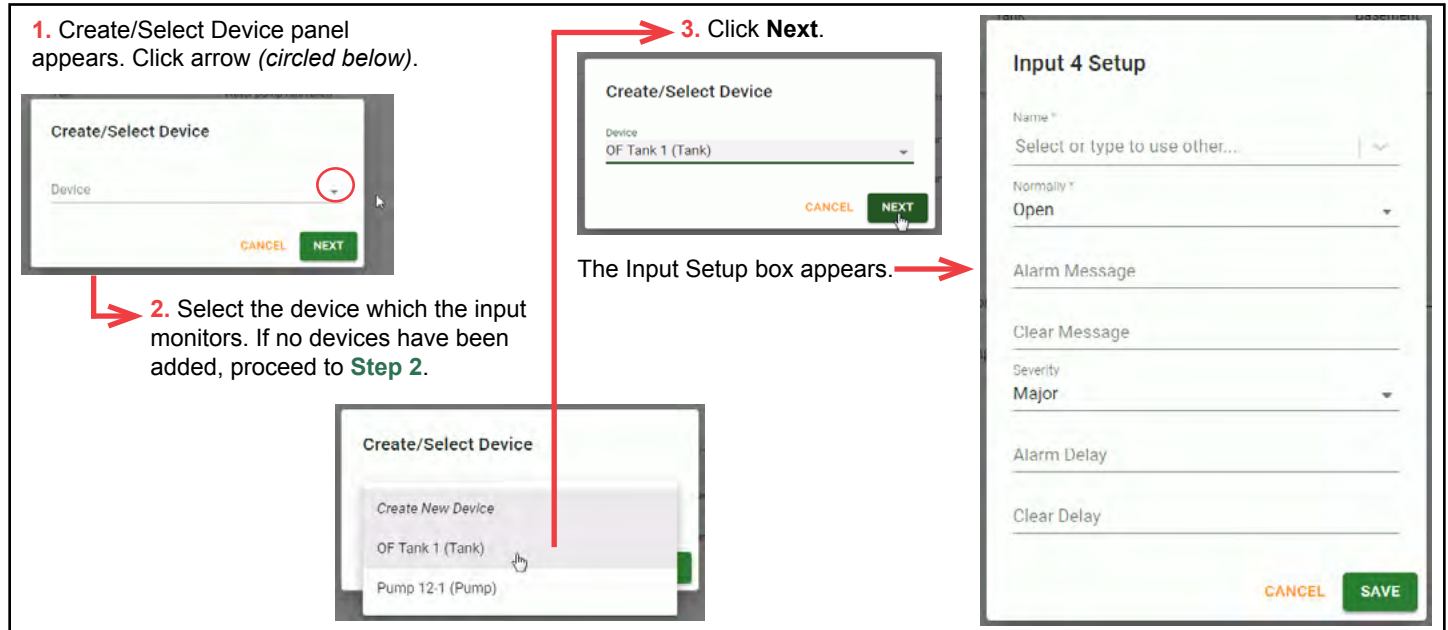


Figure 5: Adding an Input

The Input Setup box always displays the number of the input being configured (for example, Input 4 in Figure 5).

Configure the **Input Setup** box fields from top to bottom as follows:

- Enter a name for the input. The name can be selected from a pre-populated menu that appears when the user clicks the downward-pointing arrow, or a new input name can be typed.
- Select **Open** if the dry contact is normally open, or **Closed** if the dry contact is normally closed.
- Compose an **Alarm Message** which will appear when System users are notified about this alarm (for example, "Tank is leaking" or "Pump Motor Oil Hot.").
- Compose a **Clear Message** to be sent to System users when this alarm is cleared (for example, "Tank is OK" or "Pump Motor Oil Temp OK.").
- Set the alarm **Severity** from the provided drop-down menu. Refer as needed to the alarm key in Figure 1.
- Set the **Alarm Delay**. This is the number of seconds that an alarm must be active before the system reports an alarm and sends alarm notifications. This filters out bouncing alarms, preventing unnecessary alarm notifications and History log entries. A delay setting of 5 seconds, for example, will filter out any bouncing alarms recurring more frequently than every 5 seconds.
- Set the **Clear Delay**. This is the number of seconds that an alarm must be inactive before the system clears the alarm and sends alarm-cleared notifications. The Clear Delay feature filters out bouncing alarm clearances, similar to the Alarm Delay feature.
- Click **Save**. The Inputs display will refresh with the new Input added.
- Repeat the above procedure to add all dry-contact inputs needed for your alarming system.

Step 2: Add a New Device

To add a new device when needed, follow these steps:

- Click the plus sign on an unassigned row of the Inputs display. The **Create/Select Device** dialog box will appear as shown in Figure 6.
- Select *Create New Device* from the pulldown menu (see Step 2 in Figure 5). The fields shown in Figure 6 at right open.
- Enter a Name for the device.
- In the Equipment Type field, click the arrow to reveal the types menu. Select the appropriate type.
- In the Location field, enter the device location. Clicking the arrow reveals a menu of locations already entered for other devices.
- Click **Next**. The Create/Select Device window closes and an Input Setup box appears, enabling the user to add an input associated with the newly created device as described in **Step 1: Add and Configure Dry-Contact Inputs**. In the background, the Devices display refreshes with the new device added.

Step 3: Add and Configure an Analog

Analog sensors are added and edited in the UI much like bistate dry-contact inputs, with two differences: The NAVI UI only accommodates one analog, and the analog has more settings. Follow these steps:

- If no analog has been configured, click the plus icon on the right side of the Analogs display to open the **Create/Select Device** box.
- If the analog sensor will monitor a device not yet added to the UI, add the device as described in **Step 2: Add a New Device**. If the analog sensor is monitoring a device already added in the UI, select that device. Click **Next**.
- The **Analog 1 Setup** box opens (see Figure 7 at right). Configure settings as follows:
 - In the Name field, select a name from the menu or type a different name reflecting the analog's function (For example, temperature, pressure, or level as in fluid level in a tank). **Note:** The Name field appears and is editable only in the Analog 1 Setup box, not the Settings box.
 - Enter appropriate measurement Units for the analog (For example, degrees, PSI, or gallons).
 - Select a precision level. The menu provides a range from whole numbers (#) to ten-thousandths (#.0000).
 - Select the Mode used by the sensor (Current or Voltage).
 - Set the minimum and maximum loop amperages or voltages as defined by the analog sensor.
 - Set the minimum and maximum readings as defined by the analog sensor (For example, 0 and 300 for a 300-gallon tank level, or -20 and 120 for temperature in degrees F).
 - Set the Hysteresis level to control bouncing alarms. For example, a Hysteresis setting of 2 degrees will prevent temperature alarms from occurring unless thresholds are crossed by at least 2 degrees. This prevents unnecessary alarms and preserves alarm history capacity.
 - Set alarm conditions. This setting tells the system when to issue an alarm based on the analog reading versus a threshold set by the UI user. The Analog Setup provides a three-part tool to set up to four alarm conditions. Refer to the key and examples in Figure 8.
- Click **Save** when all Analog Settings are complete. The Settings page will refresh and show the newly added Analog.

Figure 6: New Device fields

Figure 7: Analog Setup Box

Using the **Alarm Conditions** field in Analog Setup

Click to add Condition

Click for alarm severity selection menu

Alarm Conditions +

Direction	Threshold	Severity
>		Major

Click to select > (greater than) or < (less than)

Type in number or use arrows

Click to cancel Condition

Threshold

23

Example Alarm Conditions: Tank Nearly Full or Empty

Situation: We need to avoid letting the 300-gallon tank overflow or go empty. Need a minor alarm when the level exceeds 260 gallons or drops below 40 gallons, and a major alarm when the level exceeds 280 gallons or drops to 20 gallons.

Direction	Threshold	Severity	
>	260	Minor	More than 260 gallons = Minor Alarm
>	280	Major	More than 280 gallons = Major Alarm
<	40	Minor	Less than 40 gallons = Minor Alarm
<	20	Major	Less than 20 gallons = Major Alarm

Figure 8: Setting Alarm Conditions

Step 4: Configuring Email and Text Notifications

Each Device can be configured with multiple email addresses and phone numbers for alarm notifications. Whenever that Device goes into alarm or an alarm is cleared, the NAVI system will automatically email and/or text the configured alarm or clear message to all of the configured addresses and numbers. Follow the steps in Figure 9 below to add contacts.

1. Click notification icon for the desired Device. Device <Name> Contacts box appears.

No Contacts Configured
Click to Edit

2. Type an email address or phone number into one of the provided fields. A "Create" message appears as shown below; click on it.

Device Pump 12-1 Contacts

Emails
Select or type to add...

Phone Numbers
Select or type to add...

CANCEL SAVE

Device Pump 12-1 Contacts

Emails
jsmith@management1.com

Create "jsmith@management1.com"

CANCEL SAVE

3. If needed, type a second email address or phone number. It will appear beneath the first one, as shown below. Click on the "Create" message to save the second contact.

Device Pump 12-1 Contacts

Emails
jsmith@management1.com x

jsmith2019@hotmail.com

Create "jsmith2019@hotmail.com"

CANCEL SAVE

4. Add telephone numbers (for text messages) the same way as email addresses. Telephone numbers must start with +1 and have no spaces, hyphens, or other characters other than numbers. Add all the contacts that are needed. Click the **SAVE** button when finished.

Device Pump 12-1 Contacts

Emails
jsmith@management1.com x

Phone Numbers
+16148675309

Create "+16148675309"

Notes:

A plus sign (+) must precede phone numbers, as shown above at right.

Click the circled X icon to the right of any completed contact to delete that contact information.

Click the plain x icon farther to the right to delete all email addresses or phone numbers.

The slash on the notification icon disappears after contacts are added.

Figure 9: Configuring Notifications

Other NAVI UI Features

Using History Displays

The NAVI UI will display the most recent alarm events on History pages. History pages are available for individual inputs, the analog, individual devices, and the entire system. Click this icon to open a history display: 🕒

The screenshot shows the NAVI web interface for 'City Center Mall'. On the left is a navigation menu with 'History' selected. The main area displays a table of system-wide alarm events. To the right, a popup window titled 'Water Pump History' shows a detailed view of events for a specific device.

Time	Location	Device	Alarm	Message
2019-03-28 08:44:01	Basement	Water Pump	Vibration Very High	Alarm OK
2019-03-28 08:43:59	Basement	Water Pump	Fail	Water pump has failed
2019-03-28 08:43:56	Basement	Water Pump	Fail	Water pump has failed
2019-03-28 08:43:56	Basement	Water Pump	Vibration Very High	Alarm OK
2019-03-28 08:39:12	Basement	Auxiliary Pump	Fail	Alarm OK
2019-03-27 15:49:45	Basement	Water Pump	Fail	Water pump has failed
2019-03-27 15:49:45	Basement	Water Pump	Vibration Very High	Alarm OK
2019-03-26 13:12:58	Basement	Water Pump	Fail	Water pump has failed
2019-03-26 13:12:58	Basement	Water Pump	Vibration Very High	Alarm OK

System history display above shows alarms and alarm clearances for all system elements. At right is the history display for one device.

Time	Alarm	Message
2019-03-28 08:44:01	Vibration Very High	Alarm OK
2019-03-28 08:43:59	Fail	Water pump has failed
2019-03-28 08:43:56	Fail	Water pump has failed
2019-03-28 08:43:56	Vibration Very High	Alarm OK
2019-03-27 15:49:45	Fail	Water pump has failed
2019-03-27 15:49:45	Vibration Very High	Alarm OK
2019-03-26 13:12:58	Fail	Water pump has failed
2019-03-26 13:12:58	Vibration Very High	Alarm OK
2019-03-25 13:37:04	Fail	Water pump has failed
2019-03-25 12:37:04	Vibration Very High	Alarm OK
2019-03-21 15:44:45	Fail	Alarm OK

Rows are hidden here to save space

CLOSE

Figure 10: History displays

The navigation panel History menu item will open a full-page history display including all of the NAVI system's devices, inputs, and analogs as shown on the left in Figure 10 above. That presents a top-down chronology of up to 250 alarm events occurring in the system. The device name, location, alarm, and alarm message appear for each alarm event, along with a color-coded icon showing each alarm's severity.

On the Status page, history icons appear for every device, input, and analog. Clicking those icons will open smaller popup history displays for the selected element. The history display for a device will include the most recent activities for all inputs and analogs monitoring that device.

These lists are read-only. Each can be refreshed by clicking the icon at upper right. The popup History displays are closed by clicking **CLOSE** at lower right or just clicking the screen outside the popup.

History displays' capacities are limited to the most recent 50 items for devices, inputs, and analogs, and 250 items for the system history. Because of those limits, it is advisable to set Alarm Delays and Clear Delays high enough to avoid bouncing alarms. Failure to do so can cause the History displays to quickly fill up with alarm information you don't need while bumping older alarm entries that you might need. History entries cannot be recovered once they are purged due to these limits.

Alarm histories for elements deleted from the NAVI system are also deleted and cannot be recovered.

Network Page

The Network Page is the third item on the navigation panel menu. This includes:

- The modem IP address in the Modem Settings section. This applies only to units equipped with the wireless modem.
- WAN (Port 1) settings (IP address, Default route). This port needs to be configured with access to the Internet when a wireless modem is not being used.
- LAN (Port 2) settings (IP Address, DHCP Server enable/disable, DHCP IP Range). This port is for local access by a laptop or computer configured to receive an IP address via DHCP.

Settings Page

The fourth menu item on the navigation panel opens the Settings page. This includes:

- The Site name, Company name, and Time Zone, all of which can be edited by clicking the pencil icon.
- Login settings (Username and Password). Password can be edited by clicking the pencil icon. Username cannot be edited.
- The Privacy setting, called Location Tracking. This slide button enables the NAVI system to access location coordinates provided by the phone modem in the NAVI cabinet. When Location Tracking is enabled, the location appears with other modem information on the About Page.
- The Theme setting. This slide button changes the UI to Dark Mode, as shown in Figure 11 at right.

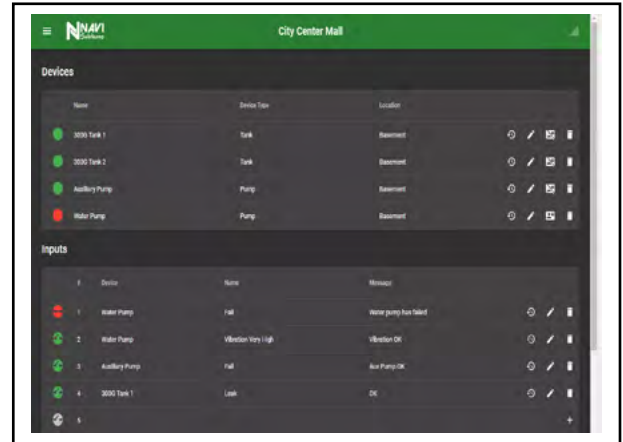


Figure 11: Status Page in Dark Mode


About Page

The fifth navigation pane menu item opens the About Page, which provides at-a-glance information about the NAVI Notify product and the modem, specifically:

- Product Name, Version, and Copyright information
- (If a modem is in use) Modem WAN Address, Signal Strength, Location (if location tracking is enabled), Type, Service Level, Operational State, and IPv4 Operational State. This information does not appear if no modem is in use.

The About Page can be opened by clicking the signal strength icon (light green triangle) on the right end of the GUI header bar in addition to the navigation panel menu item.

Editing Configurations

Many settings made while configuring Devices, Inputs, or Analogs can be edited easily in the UI. On the Status page, click the pencil icon  next to the Device, Input, or Analog to be edited. The settings window for that Device, Input, or Analog will open; edit settings as desired, then click **SAVE**.

Logout

Click Logout at the bottom of the navigation page menu to log out of the GUI.

Notes

Customer Support

Contact NAVI Solutions

- For quoting, order status and general inquiries please contact: sales@nav-llc.com
- For technical support please contact Support@navi-llc.com
- To speak to a NAVI representative, please call (610) 647-NAVI (6284)
- Hours of Operation: Monday – Friday 8:30 AM – 5:30 PM Eastern Time



Order from: **C A Briggs Company**

622 Mary Street; Suite 101; Warminster, PA 18974

Phone: 267-673-8117 - Fax: 267-673-8118

Sales@cabriggs.com - www.cabriggs.com