



## STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

### Table of Contents

1. INTRODUCTION .....	3
2. PRODUCT RATINGS .....	3
3. TOOLS REQUIRED FOR INSTALLATION .....	3
4. PRODUCT WARNINGS .....	3
5. OVERVIEW .....	4
6. SYSTEM INSTALLATION .....	4
6.1 System Configurations .....	5
6.1.1 Network with One Level Gauge .....	5
6.1.2 Auxiliary Level Gauges .....	5
6.2 Electrical Installation .....	6
6.2.1 Voltage Requirements.....	6
6.2.2 Navigator Wiring.....	6
6.2.3 Valve Wiring .....	7
6.2.4 Intelli–Tank Level Gauge Wiring .....	7
6.3 Mechanical Installation .....	8
6.3.1 Panel Cutout.....	8
6.3.2 Required Clearance Behind Panel.....	8
6.3.3 Optional Color Indicator Installation .....	9
7. INITIAL SETUP FOR A NEW SYSTEM – MINIMUM SETUP .....	10
7.1 Assigning a Valve.....	10
7.2 Calibrating a Valve .....	10
7.3 Configuring a Level Gauge .....	11
8. CONFIGURING YOUR SYSTEM .....	12
8.1 Setup Navigation .....	12
8.2 Valve Assignment .....	13
8.3 Valve Calibration .....	13
8.4 LED Bright Level .....	14
8.5 Firmware Version .....	14
8.6 Factory Default Configuration .....	14

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

8.7	Tank Fill Profile 1 .....	15
8.8	Tank Fill Profile 2 .....	15
8.9	Tank Fill Profile 3 .....	16
8.10	Power On Auto Mode.....	16
8.11	Auto Mode Max Open 30%.....	16
8.12	Auto Mode Max Open 50%.....	17
8.13	Auto Mode Max Open 100%.....	17
9.	OPERATIONAL FEATURES .....	18
9.1	Opening and Closing the Valve.....	18
9.2	Valve Position Indicators.....	18
9.3	Automatic Tank Fill Operation.....	18
10.	TROUBLESHOOTING .....	19
10.1	Error Indicator.....	19
10.2	Valve Offline .....	19
10.3	Level Gauge Offline .....	19
10.4	Multiple Valves Assignment .....	20
11.	SOFTWARE UPDATES.....	21
11.1	Obtaining the Latest Software.....	21
11.2	Software Update via USB .....	21
11.3	Software Update via Akroview .....	22
12.	ACCESSORIES .....	22

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 1. INTRODUCTION

The following is intended to provide the basic instructions for installation, operation and maintenance of the Akron Brass Style 9330 Navigator Tank Fill Controller. The Style 9330 is compatible with the Navigator Electric Actuator. **IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY, NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE, OR PERSONAL INJURY, AND WILL INVALIDATE THE WARRANTY!**

## 2. PRODUCT RATINGS

Operating Voltage: 10 – 32VDC; 10V minimum required at the valve for proper operation.  
Operating Current: 2-10A @ 12VDC, 1-5A @ 24VDC (depends on valve type)  
Weight: 0.2 lbs. [0.1 kg]  
Operating Temperature: -40°C - 70°C  
Storage Temperature: -40°C - 85°C  
Ingress protection: IP56 equivalent  
J1939 CAN networked

## 3. TOOLS REQUIRED FOR INSTALLATION

- 5/32 Allen key
- 3/8 wrench

## 4. PRODUCT WARNINGS

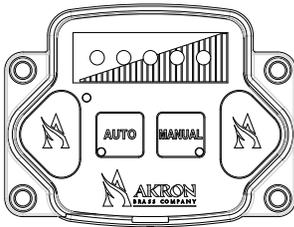
	<ul style="list-style-type: none"><li>• Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury.</li></ul>
	<ul style="list-style-type: none"><li>• Indicates a hazardous situation which, if not avoided, COULD result in death or serious injury.</li></ul>
	<ul style="list-style-type: none"><li>• Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</li></ul>
	<ul style="list-style-type: none"><li>• Addresses practices not related to personal injury.</li></ul>



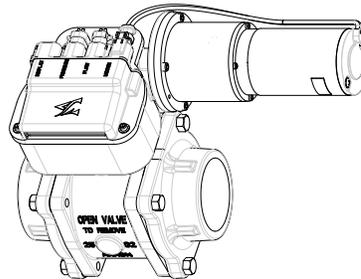
# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 5. OVERVIEW

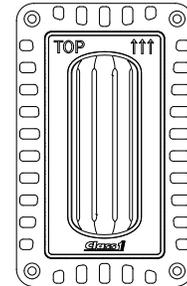
The Style 9330 Navigator tank fill controller allows the user to control an Akron Brass electric valve in conjunction with a Class 1 Intelli-Tank level gauge for tank fill applications. It is designed to be used with an Akron Brass Swing-Out valve only. The Style 9330 is a control interface and tank fill controller. The Navigator system communicates via J1939 CAN protocol and is a distributed system. In Manual mode, the 9330 is strictly a user interface that allows the user to view valve position and send commands to the valve. In Auto tank fill mode, the 9330 sends commands to open or close the valve, based on information received from the Intelli-Tank level gauge, to maintain a desired tank level automatically. The motor driver on the electric actuator is the unit that interprets commands from the 9330 and drives the valve.



Style 9330 Navigator Controller



Navigator Electric Valve



Class 1 Intelli-Tank Level Gauge

## 6. SYSTEM INSTALLATION

The style 9330 controller is installed in a networked configuration with a valve and level gauge. Other J1939 compatible devices may reside on the same CAN network, but only one Navigator tank fill system may reside on the network. A system consists of one 9330, one electric valve, and one or more Intelli-Tank level gauges. Harnesses are available from the factory. Refer to ACCESSORIES, section 12 for additional details on connector and harness part numbers.

Harnesses for the Intelli-Tank level gauge are available from Class 1.

### NOTICE

Only one 9330 controller may be associated with the valve being used for the tank fill system. Other Navigator valve controllers may reside on the same CAN network, but they must not be associated with the tank fill controller valve.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)

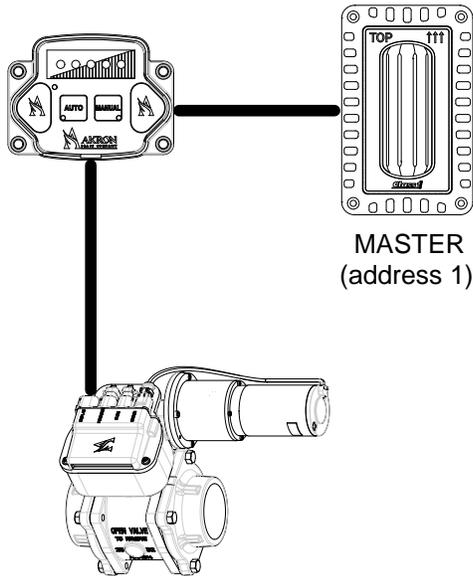


# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 6.1 System Configurations

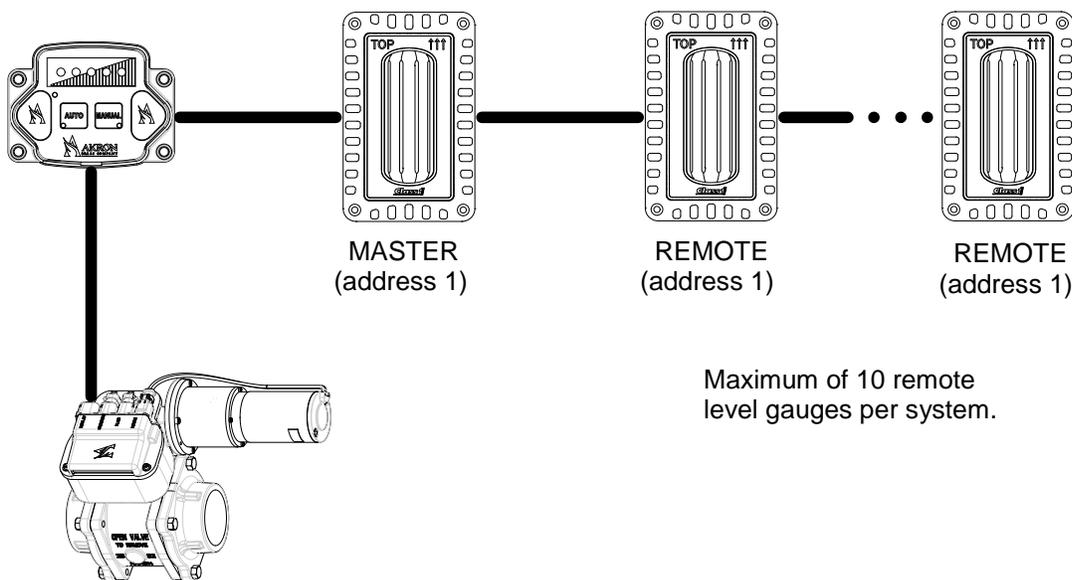
### 6.1.1 Network with One Level Gauge

The minimum Navigator tank fill system has a 9330, a valve, and a master level gauge connected on a CAN network.



### 6.1.2 Auxiliary Level Gauges

The Navigator tank fill system can have multiple auxiliary level gauges connected to the same CAN network. Each auxiliary level gauge must be configured as a remote with the default identification address 1. Refer to the Class 1 Intelli-Tank operator manual for details on configuring the level gauge.



PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)



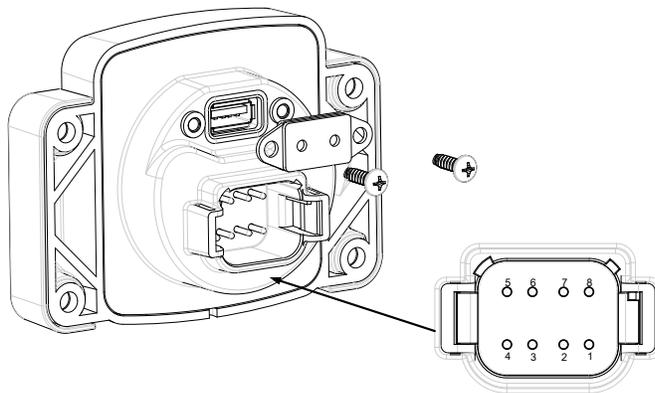
# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 6.2 Electrical Installation

### 6.2.1 Voltage Requirements

The system will operate on 12VDC or 24VDC systems. It will operate properly if the voltage is between 10VDC and 32VDC at the valve. System voltage is not an adequate measurement to determine if the voltage is appropriate at the valve. To avoid excessive voltage drop and undesired operation, the wire gauge should be 14 AWG or larger and the distance from power source to the valve should be no more than 20 feet.

### 6.2.2 Navigator Wiring



Pin	Function
1	No Function
2	CAN High
3	Ground Out
4	Ground In
5	Battery Voltage In
6	Battery Voltage Out
7	CAN Low
8	No Function

The pinout for the Navigator tank fill controller connector is shown in the table above. This connector mates with Deutsch Connector DT06-08SA-EP08 & W8S.

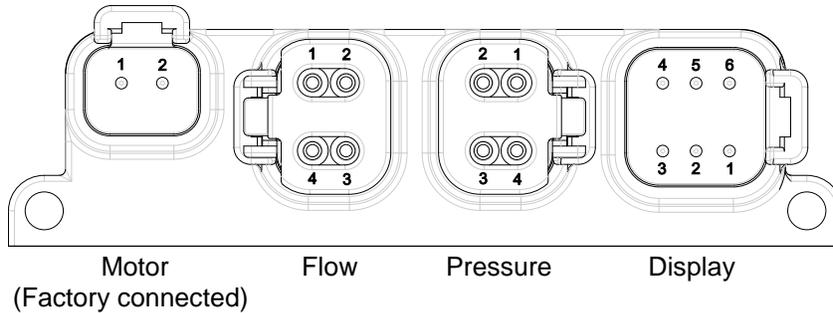
### **NOTICE**

Pins 4 and 5 are the power being supplied to the Navigator tank fill controller. Pins 3 and 6 can be used to supply power to the valve (connect to pins 3 and 4 of the 6 pin Display connector on the valve) or to additional Navigator controllers.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 6.2.3 Valve Wiring



The pinout for the valve Motor connector is shown in the table below. The motor connector mates with Deutsch Connector DT06-2S and W2S.

Pin	Function
1	Motor A
2	Motor B

The pinout for the valve Display connector is shown in the table below. The display connector mates with Deutsch Connector DT06-6S and W6S.

Pin	Function
1	CAN High
2	Shield
3	Ground
4	Battery Voltage
5	No Function
6	CAN Low

### **NOTICE**

The valve Flow Connector and Pressure connector are not applicable to the Style 9330. Leave these plugged with included plugs.

## 6.2.4 Intelli-Tank Level Gauge Wiring

Refer to the Class 1 Intelli-Tank operator manual for details on wiring and operation of the level gauge. The level gauge must be connected to the CAN network of the 9330.

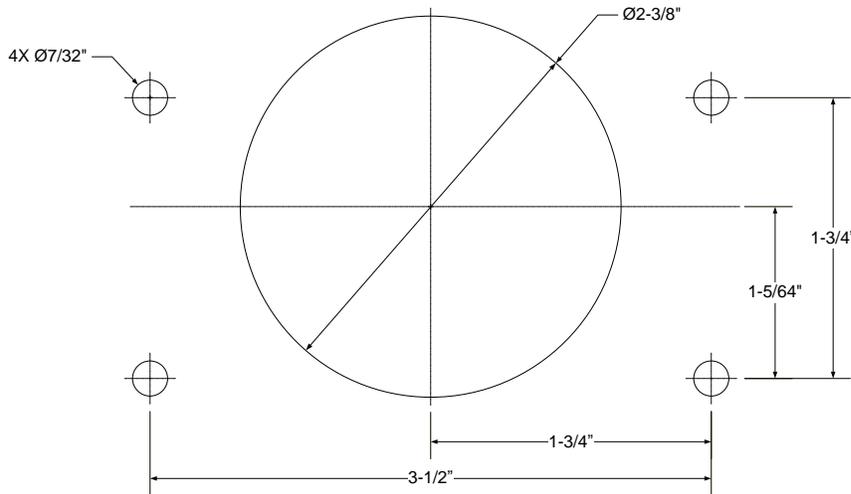


# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

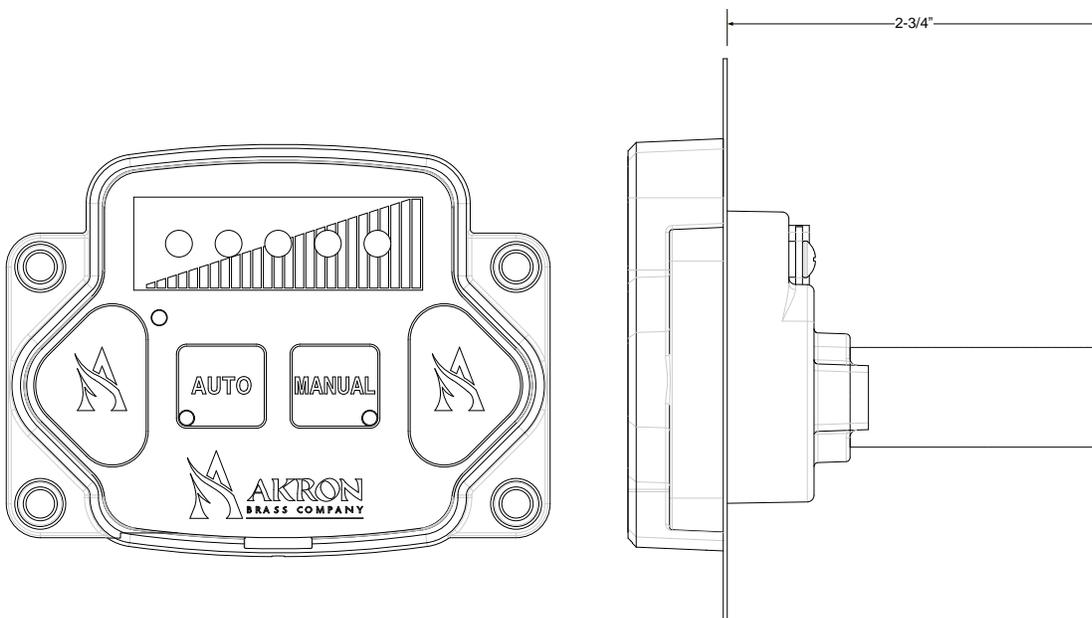
## 6.3 Mechanical Installation

The Navigator tank fill controller is attached to the panel using 4, 10-24 socket-head, cap-screws. An installation torque of 6-8 in-lbs. should be applied when installing to prevent damage to the enclosure. Appropriate mounting hardware is included with all Navigator controllers. Panel inserts or other means of securing screws can be used.

### 6.3.1 Panel Cutout



### 6.3.2 Required Clearance Behind Panel



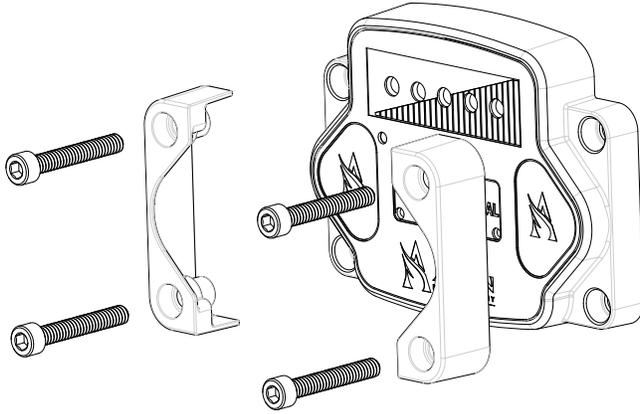
PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)



## STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

### 6.3.3 *Optional Color Indicator Installation*

Assemble the color indicators below the mounting bolts. Follow the torque requirements listed in the “Mechanical Installation” instructions.



#### **NOTICE**

The Navigator controller is a sealed unit. Disassembly of the unit will void any warranty. There are no user serviceable parts in the Navigator controller or motor driver. If service is required, the unit should be returned to the factory.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 7. INITIAL SETUP FOR A NEW SYSTEM – MINIMUM SETUP

Upon installation of a new system, several items need to be configured before the system will operate properly. The items that must be configured for proper operation are:

- Assignment of controller to valve
- Valve calibration
- Level gauge communications method
- Level gauge calibration

Other options, such as tank fill profile, maximum valve opening, LED brightness etc., can be configured at any time via the Setup Menu, but are not required for proper system operation during initial installation.

### 7.1 Assigning a Valve

Before controlling a valve or initiating automatic tank fill, the Style 9330 must be assigned to a valve. This step tells the 9330 what valve it is controlling. In order for the assignment to take place, the desired valve must be powered and connected to the 9330 via a CAN network (see SYSTEM INSTALLATION, section 6 for wiring instructions). Valve assignment will only need to be performed once and can be changed at a later time via the Setup Menu if required. There are two ways to assign a valve; automatically or manually. If there is only one valve installed on the CAN network, a 9330 on the network in its factory default configuration will automatically be assigned to that valve. If the 9330 has been previously assigned to a valve, the new valve will need to be assigned manually using the Setup Menu (see Valve Assignment, section 8.2).

If there are multiple valves on the network, the additional valves must be temporarily removed from the network until after the intended valve has been assigned.

#### **NOTICE**

**The Navigator tank fill controller cannot be assigned to more than one valve and will remember its assigned valve even when the power is off.**

Once the Navigator tank fill controller has been successfully assigned to a valve, the top row of LEDs will indicate the position of the valve. The Navigator tank fill controller can now be used to open and close the valve. However, valve calibration must be performed in order to display valve position accurately.

### 7.2 Calibrating a Valve

The valve must be calibrated to ensure the position of the valve is accurate. Navigate to the Valve Calibration setup code 1-2 (for details on accessing and navigating the setup, see Setup Menu Navigation, section 8.1). After you have verified that the valve is properly installed to the motor, and there is no danger of damage due to water or pressure in the line, press ◀RED to start the calibration process.

The valve will fully open and close several times to calibrate the valve position sensor. During the valve calibration, the top row of LEDs will indicate the position of the valve. After the calibration is complete, the LEDs will return to the Valve Calibration setup. Press the ■PRESET key to exit Setup and return to normal operation.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
www.akronbrass.com



## STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

### 7.3 Configuring a Level Gauge

Before initiating the automatic tank fill feature of the Style 9330, the Intelli-Tank level gauge must be configured for the CAN communications method and calibrated for the tank being used. The 9330 communicates with the Intelli-Tank level gauge using the Intelli-Tank CAN identification address 1, which is the factory setting for the Intelli-Tank products. Refer to the Intelli-Tank operating instructions for details on configuring and calibrating the level gauge.

#### **NOTICE**

**To communicate with the 9330, the tank level gauge must be configured as a Master with CAN communications and using the default CAN identification address 1. Refer to the Intelli-Tank operating instructions to connect, configure, and calibrate the level gauge for the tank being used.**

Initial setup is now complete.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 8. CONFIGURING YOUR SYSTEM

### 8.1 Setup Navigation

The Setup Menu provides access to the Navigator tank fill controller's settings and options. The setup options are as shown in the table below.

Setup Menu Option	Setup Code
Valve Assignment	1-1
Valve Calibration	1-2
LED Bright Level	1-3
Firmware Revision	1-8
Factory Default Configuration	1-9
Tank Fill Profile 1	2-1
Tank Fill Profile 2	2-2
Tank Fill Profile 3	2-3
Power On Auto Mode	2-6
Auto Mode Max Open 30%	3-1
Auto Mode Max Open 50%	3-2
Auto Mode Max Open 100%	3-3

To access the Setup Menu during normal operation, press and hold the ◀RED and ▶GREEN buttons for 5 seconds. The 3 yellow LEDs will begin flashing to indicate the Setup Start. When at the Setup Start, the ▶GREEN button can be used to advance the Setup Code. The Setup Code is indicated by the middle yellow LED flashing the first digit count of the setup code, followed by flashing the second digit count of the setup code on the right adjacent yellow LED. After a short pause, the setup code is repeated. The Setup Menu will remain on the current setup code until it is advanced again using the ▶GREEN button. After the last Setup Code is advanced, the Setup Start will be indicated again.

When at the Setup Start indication, pressing the ◀RED button will exit the Setup Menu and return to Manual operation. Alternately, at any time while in the Setup Menu, the ■MANUAL or ■AUTO button may be pressed to exit the Setup Menu and enter the manual valve control mode or automatic tank fill mode.

When in the Setup Menu and flashing a Setup Code, The ◀RED button is used to change or initiate the function of that Setup Code. The red and green LEDs on the top row are used to indicate the status of a Setup Menu Option.

#### **NOTICE**

The menu can only be advanced using the Green button. Pressing the Red button will change the settings and will not go to the previous menu option.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 8.2 Valve Assignment

Setup Start → Setup code 1-1

The Valve Assignment option is used to reassign a valve to the Navigator tank fill controller. Once in setup menu 1-1, press the ◀RED button to assign a new valve. Only a single valve may be connected to the controller to be successfully associated. The green LED will flash momentarily and then turn to solid green when the valve is successfully associated.

When the ◀RED button is pressed the controller will query all devices on the CAN network and if only one valve is found, it will be assigned to the controller. If more than one valve is found, the controller red LED will indicate the Multiple Valves Assignment error code 2-5 (see TROUBLESHOOTING, section 10 for error code descriptions). If no valves are found, the controller red LED will indicate the Valve Offline error code 2-3. If a new valve is not successfully associated with the controller, the original valve association will be retained.

### NOTICE

**After a valve is successfully associated with the 9330, additional valves may be reconnected to the CAN network. The preferred method of temporarily removing valves from the 9330 CAN network is to disconnect the “Display” connector from the valve, which removes the valve power.**

If the controller is in its default configuration without any valve associated, the red LED will be on for this setup option.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

## 8.3 Valve Calibration

Setup Start → Setup code 1-2

The Valve Calibration option is used to calibrate the valve position. Once in setup menu 1-2, press the ◀RED button to calibrate the valve. A valve must be associated and connected to the controller to be successfully calibrated.

The valve will fully open and close several times to calibrate the valve position sensor. During the valve calibration, the LEDs will indicate the position of the valve. After the calibration is complete, the LEDs will return to the Valve Calibration setup and the green LED will be on. If the associated valve is not connected to the controller, the controller red LED will indicate the Valve Offline error code 2-3 (see TROUBLESHOOTING, section 10 for error code descriptions).

If a valve calibration cannot complete or has been interrupted, the red LED will be on for this setup option.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
www.akronbrass.com



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 8.4 LED Bright Level

Setup Start → Setup code 1-3

The LED Bright Level option is used to select one of three brightness levels for the controller LEDs. Once in setup menu 1-3, press the ◀RED button to cycle through the three available brightness settings. The green LED is on when the LED bright level is at 100%. The red LED is on when the LED bright level is at either of the two lower levels.

The LED bright level will remain at the configured setting until changed again. The factory default configuration for LED Bright Level is 100%.

Press the ▶GREEN button to advance to next setup code or ■ MANUAL to exit setup menu.

## 8.5 Firmware Version

Setup Start → Setup code 1-8

The Firmware Version option is used to display the current version of controller firmware. Once in setup menu 1-8, press the ◀RED button to display the firmware version. The green LED will flash a two digit code to indicate the version number. The first digit count will flash, followed by a short delay and then the second digit count will flash.

After indicating the firmware version, the Setup Menu will return with the red LED on. Pressing the ◀RED button again will repeat the process of flashing the firmware version code one time. This may be repeated as many times as necessary.

Press the ▶GREEN button to advance to next setup code or ■ MANUAL to exit setup menu.

## 8.6 Factory Default Configuration

Setup Start → Setup code 1-9

The Factory Default Configuration option is used to return the controller options to the factory settings. The factory settings will not be restored until the Setup Menu is exited. Once in setup menu 1-9, press the ◀RED button to toggle this option on. The green LED will flash momentarily and then remain on to indicate that factory settings will be restored. Press the ◀RED button again to toggle this option off. When the red LED is on, the factory settings will not be restored after leaving the setup menu.

To complete the factory settings reset, exit the setup menu with the green LED on. After a brief delay the controller will reset. When the controller returns from reset, the factory default configuration will be restored.

### NOTICE

**The Navigator tank fill controller will lose its valve association when factory defaults are restored. If only one valve is on the connected CAN network when the factory defaults are restored, the controller will automatically associate with that valve. Otherwise, the controller will not have an associated valve until a single valve is connected to it.**

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
www.akronbrass.com



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 8.7 Tank Fill Profile 1

Setup Start → Setup code 2-1

Refer to the Class 1 Intelli-Tank operator manual for details on how the Intelli-Tank level gauge indicates tank level.

When the controller is in automatic tank fill mode, Tank Fill Profile 1 opens the valve when the tank level gauge is indicating 1/2 or lower, and closes the valve when the tank level gauge is indicating 7/8 or higher. Once in setup menu 2-1, press the ◀RED button to enable this profile. The green LED will flash momentarily and then remain on when the profile is enabled.

Tank Fill Profile 1 is the factory default configuration.

Valve Action	Tank Level
Open	50% Full or less
Close	90% Full or more

Press the ►GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

## 8.8 Tank Fill Profile 2

Setup Start → Setup code 2-2

Refer to the Class 1 Intelli-Tank operator manual for details on how the Intelli-Tank level gauge indicates tank level.

When the controller is in automatic tank fill mode, Tank Fill Profile 2 opens the valve when the tank level gauge is indicating 1/2 or lower, and closes the valve when the tank level gauge is indicating FULL. Once in setup menu 2-2, press the ◀RED button to enable this profile. The green LED will flash momentarily and then remain on when the profile is enabled.

Valve Action	Tank Level
Open	50% Full or less
Close	100% Full

Press the ►GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335

[www.akronbrass.com](http://www.akronbrass.com)



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 8.9 Tank Fill Profile 3

Setup Start → Setup code 2-3

Refer to the Class 1 Intelli-Tank operator manual for details on how the Intelli-Tank level gauge indicates tank level.

When the controller is in automatic tank fill mode, Tank Fill Profile 3 opens the valve when the tank level gauge is indicating 1/4 or lower, and closes the valve when the tank level gauge is indicating 3/4 or higher. Once in setup menu 2-3, press the ◀RED button to enable this profile. The green LED will flash momentarily and then remain on when the profile is enabled.

Valve Action	Tank Level
Open	25% Full or less
Close	75% Full or more

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

## 8.10 Power On Auto Mode

Setup Start → Setup code 2-6

The Power On Auto Mode option is used to have the controller immediately begin automatic tank fill operation when it is powered on. Once in setup menu 2-6, press the ◀RED button to enable this option. The green LED will flash momentarily and then remain on when this option is enabled.

The red LED is on when this option is not enabled and the controller will power on in the manual valve control mode. The factory default configuration for Power On Auto Mode is not enabled.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

## 8.11 Auto Mode Max Open 30%

Setup Start → Setup code 3-1

When the controller is in automatic tank fill mode, the valve will open to a maximum of 30% when filling the tank. Once in setup menu 3-1, press the ◀RED button to enable this option. The green LED will flash momentarily and then remain on when this option is enabled.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.



## STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

### 8.12 Auto Mode Max Open 50%

Setup Start → Setup code 3-2

When the controller is in automatic tank fill mode, the valve will open to a maximum of 50% when filling the tank. Once in setup menu 3-2, press the ◀RED button to enable this option. The green LED will flash momentarily and then remain on when this option is enabled.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.

### 8.13 Auto Mode Max Open 100%

Setup Start → Setup code 3-3

When the controller is in automatic tank fill mode, the valve will fully open when filling the tank. Once in setup menu 3-3, press the ◀RED button to enable this option. The green LED will flash momentarily and then remain on when this option is enabled.

Auto Max Open 100% is the factory default configuration.

Press the ▶GREEN button to advance to next setup code or ■MANUAL to exit setup menu.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 9. OPERATIONAL FEATURES

The Style 9330 Navigator tank fill controller is easy to use and intuitive. Once configured, the operation is simple. Basic operation of the controller is described below.

### 9.1 Opening and Closing the Valve

To open the valve, press the ►GREEN button. To close the valve, press the ◀RED button. As soon as the button is released, the valve will stop moving. Hold the button to continue opening or closing the valve. If the Open and Close buttons are pressed simultaneously, the valve will stop moving.

The green LED within the Manual button will be on when the controller is in the manual valve control mode.

### 9.2 Valve Position Indicators

Valve position is indicated on the top row of LEDs as shown in the following table.

Valve Position	Red	Yellow	Yellow	Yellow	Green
Closed	ON	OFF	OFF	OFF	OFF
1% to 33% Open	OFF	ON	OFF	OFF	OFF
34% to 66% Open	OFF	ON	ON	OFF	OFF
67% to 99% Open	OFF	ON	ON	ON	OFF
Open	OFF	ON	ON	ON	ON

### 9.3 Automatic Tank Fill Operation

To begin automatic tank fill operation, press the ■AUTO button. The 9330 will commence opening and closing the valve as determined by the configured tank fill profile and level gauge indication.

The red LED within the Auto button will be on when the controller is operating in the automatic tank fill mode.



**Operation in tank-fill mode can cause pump cavitation under certain conditions if adequate water supply is not available. Operator must monitor tank level and pump operation and switch to manual mode if cavitation conditions are present.**



**When initiating the automatic tank fill operation, valve movement will not be initiated if the level gauge is indicating below the valve close level and above the valve open level. The valve will remain in the last manual position until the tank has reached a level that will open or close the valve.**

Pressing the ■MANUAL button during automatic tank fill operation will stop the tank fill operation and return the controller to manual valve control mode. Alternately, pressing the ►GREEN or ◀RED buttons during automatic tank fill operation will return the 9330 to manual valve control mode and open or close the valve while the buttons are being pressed.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
www.akronbrass.com



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 10. TROUBLESHOOTING

### 10.1 Error Indicator

The Navigator tank fill controller will diagnose and indicate common errors that prevent normal operation. The error conditions are as shown below.

Error Condition	Error Code
Valve Offline	2-3
Level Gauge Offline	2-4
Multiple Valves Assignment	2-5

Error conditions are indicated on the red LED located at the left of the top row of LEDs. The error code is indicated with a two digit code. The first digit count will flash, followed by a short delay and then the second digit count will flash. After a two second delay, the error code will be repeated. The code will continue to be displayed until the error condition is corrected.

### 10.2 Valve Offline

Error Code 2-3

This error condition indicates that the assigned valve cannot be detected on the 9330 CAN network. Make sure the assigned valve is powered and connected to the 9330. If replacing the valve, refer to Valve Assignment, section 8.2.

When associating a new valve, this error condition will also be indicated if no valve is detected on the 9330 CAN network during the assignment.

To clear this error, make sure that the assigned valve is connected to the 9330 and has power. To associate a new valve, refer to Valve Assignment, section 8.2.

### 10.3 Level Gauge Offline

Error Code 2-4

This error condition indicates that an Intelli-Tank level gauge cannot be detected on the 9330 CAN network. Make sure the level gauge is powered and connected to the 9330. The level gauge must also be configured as a Master with CAN communications and using its CAN identification address 1.

This error condition will only be indicated when attempting to put the 9330 in automatic tank fill mode. Returning to manual valve control mode will remove the error indication.

To clear this error, make sure that the level gauge is connected to the 9330 and has power. Refer to the Intelli-Tank operating instructions for details on configuring and calibrating the level gauge.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
www.akronbrass.com



## STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

### 10.4 Multiple Valves Assignment

Error Code 2-5

This error condition indicates that an attempt was made to associate a valve while multiple valves are connected to the CAN network. Make sure that only the valve to be associated is connected to the 9330 CAN network during the valve assignment setup.

To clear this error, make sure that only the valve to be associated with the 9330 is powered. Refer to Valve Assignment, section 8.2.

#### **NOTICE**

The preferred method of temporarily removing valves from the 9330 CAN network is to disconnect the “Display” connector from the valve, which removes the valve power.



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

## 11. SOFTWARE UPDATES

The controller contains custom software that can be updated in the field. There are two methods for updating the software.

- USB port on the back of the controller. See section 11.2.
- Connect to the controller via CAN network with Akroview. See section 11.3.

### 11.1 Obtaining the Latest Software

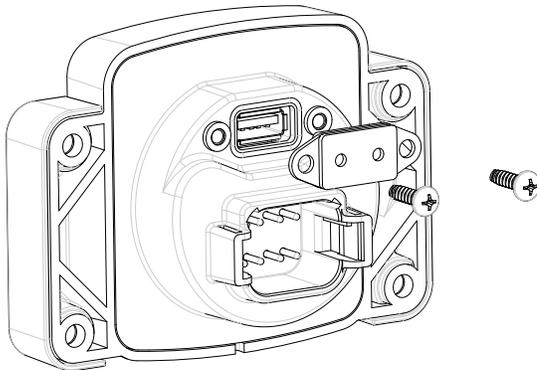
The latest software file can be found at the 9330 product page on the website. They will be located under the “Download / Updates” tab. Only one file is required to update the 9330. The file will be named 93300001\_RX-X.ABS”, where X-X is replaced with the desired revision number.

The appropriate software file can also be obtained by contacting Akron Brass Customer Service or Technical Support.

### 11.2 Software Update via USB

Located on the back of the display is a USB port that is used for software updates. Once the appropriate Navigator tank fill controller software file has been obtained, follow this procedure to update the software.

1. Load a USB drive (customer provided) with the Navigator tank fill controller software file. The file should be saved in the root directory of a USB drive that has been formatted with the FAT32 file system. The file must be the only file in the root directory with an .ABS extension.
2. Turn off power to the Navigator tank fill controller.
3. Gain access to the back of the display.
4. Remove the two screws holding the cover over the USB port, as shown below. Set the screws and cover aside to be reinstalled after the software update is complete.



5. Insert the USB drive containing the file into the USB port on the back of the Navigator tank fill controller.
6. Turn on power to the Navigator tank fill controller.
7. The top row of LEDs on the Navigator tank fill controller will sequence from left to right as the software is updating. The entire update process should take less than one minute.
8. When the green LED located at the right of the top row of LEDs turns on, the software update is complete. If the red LED is flashing, an error occurred during the update and the Navigator tank fill controller was not changed. The file named “9330.log” on the USB drive can be opened to see

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335

[www.akronbrass.com](http://www.akronbrass.com)



# STYLE 9330 Navigator™ Pro Auto Tank Fill Controller INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS

details about the error. If an error occurs, the power to the Navigator tank fill controller may be cycled to try again and/or contact Akron Brass Technical Support for assistance.

9. Turn off power to the Navigator tank fill controller.
10. Remove the USB drive from the USB port.
11. Replace the cover on the USB port using the USB cover screws.
12. Turn on power to the system and test all functions to ensure proper operation.

## 11.3 Software Update via Akroview

The most recent version of Akroview may be obtained from the 6046 product page on the website. It is located under the “Software / Multimedia” tab. Refer to the Akroview Diagnostics Software Installation and Operations Manual for installation and connecting to the Navigator tank fill controller CAN network. Once the appropriate Navigator tank fill controller software file has been obtained and the Akroview software is connected to the system as described in the Akroview Installation and Operations Manual, follow these steps to update it using Akroview.

1. Select the Navigator tank fill controller device on the Akroview main screen.
2. On the Navigator tank fill controller device screen, press the Enter Firmware Download Mode button.
3. Within the Firmware Download window, select the Sys area (shown as Step 1).
4. Press the Choose file button (shown as Step 2) and open the Navigator tank fill controller software file.
5. Press the Start download button (shown as Step 3) and wait for the file to download.
6. Press the Flash to memory button (shown as Step 4). When the Navigator tank fill controller green LED located at the right of the top row of LEDs turns on, the software update is complete.
7. Cycle power to the system and test all functions to ensure proper operation.

## 12. ACCESSORIES

Refer to the table below for Navigator tank fill controller accessory descriptions and part numbers. Accessories for the Intelli-Tank level gauge are available from Class 1.

Description	Part Number
Display CAN Network Harness	721615
Valve CAN Network Harness	721617
CAN Extension Harness - 6in.	721659
CAN Extension Harness - 3ft.	721572
CAN Extension Harness - 5ft.	721573
CAN Extension Harness - 10ft.	721574
CAN Extension Harness - 20ft.	721570
CAN Extension Harness - 40ft.	721575
CAN Network Tee	758306
CAN Network Terminators (set of 2)	123734

Contact Akron Brass Customer Service or Technical Support for more details or for assistance configuring and ordering your system.

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335  
[www.akronbrass.com](http://www.akronbrass.com)