Style 9333 & 9335 Retrofit Kit Installation Instructions

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1 Introduction

The following is intended to provide the basic instructions for replacing an older valve controller (i.e. 9303, 9313 or 9315) with a current Navigator Pro 2 model 9333 or 9335. 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 TOOLS REQUIRED

- Utility Knife
- Electricians Pliers (multipurpose, stripping and crimping)
- Appropriate electrical connectors and harnesses
- 5/32 Allen key
- 3/8 wrench

3 PRODUCT RATINGS

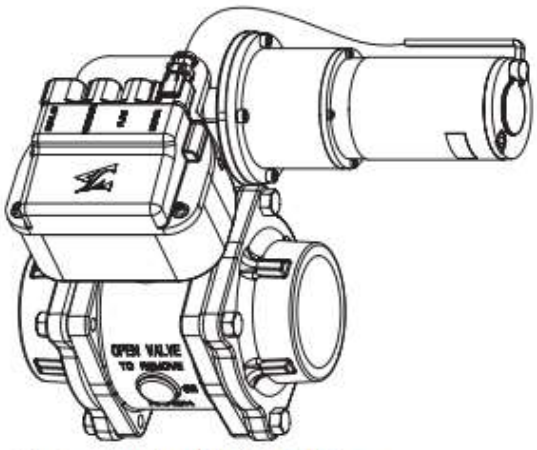
Model: 9333/9335 Operating Voltage: 10 – 32VDC; 10V minimum required AT THE VALVE for proper operation. Operating Current: 2-10A @ 12VDC, 1-5A @ 24VDC (depends on valve type) Weight = .3 lbs [.14 kg] Operating Temperature: -40°C - 70°C Storage Temperature: -40°C - 85°C Ingress protection: IP67 equivalent J1939 CAN networked

4 OVERVIEW

The Style 9333/9335 Navigator Pro controller allows the user to control an Akron Brass electric valve. It is designed to be used with an Akron Brass Swing-Out valve only. The Style 9333/9335 is a display interface only and does not contain the electronics required to drive the valve open and closed. The electronics that drive the valve are located on the electric actuator mounted to the valve. The motor driver electronics must be installed on all electric valves operated by a 9333 or 9335 Navigator Pro. The Navigator Pro system communicates via J1939 CAN protocol and is a distributed system. The display is strictly a user interface that allows the user to view information and send commands to the valve. The motor driver on the electric actuator is the unit that interprets commands from the display and drives the valve.

Style 9333 Navigator Pro Display

Style 9335 Navigator Pro Display



Navigator Pro Electric Valve

5 SYSTEM INSTALLATION

The Navigator Pro controller can be installed in a number of different system configurations and has been designed to provide the installer with flexibility during installation. This retrofit kit is intended to work with one display connected directly to one valve and includes a 10' wiring harness. If a different configuration or harness length is needed, such as an instance where there is an auxiliary controller, components should be purchased separately. Harnesses can also be made using standard Deutsch connectors and the pin-out information in the ELECTRICAL INSTALLATION section of the 9333 or 9335 manual.

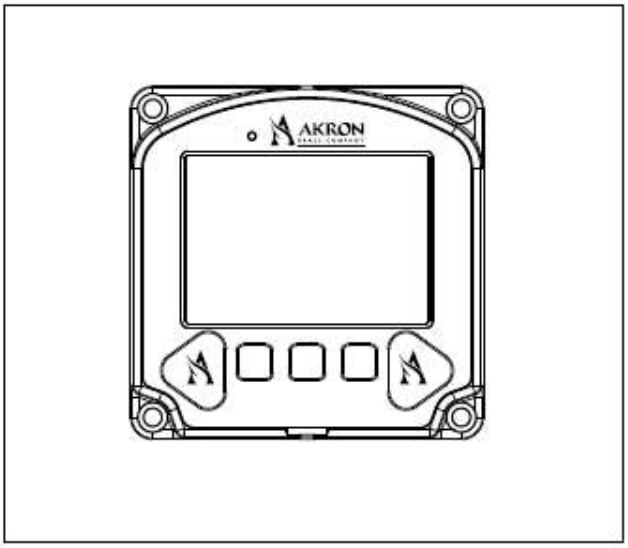
5.1 ELECTRICAL INSTALLATION

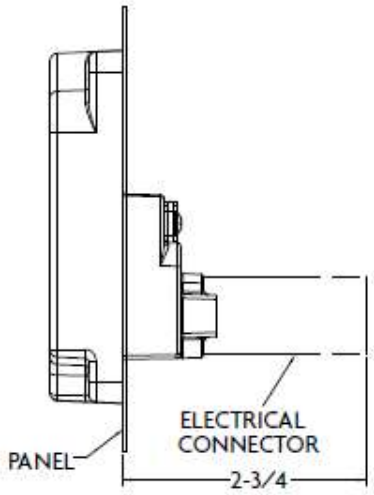
The retrofit kit includes the extension harness for the motor that allows it to plug into the motor driver, as well as the 10' harness that runs between the motor driver and the valve controller/display. If the 9335 retrofit kit is used, additional adapter harnesses may need to be ordered for the flow sensor or pressure transducer (refer to the wiring harnesses and components chart at the end of the instructions). The only modification that will need to be made to the existing wiring is changing the plug that is supplying power to the existing valve controller.

5.2 MECHANICAL INSTALLATION

The 9333/9335 valve controller display will fit the existing panel cutout and mounting holes from the 9303 or 9313/9315 and is attached to the panel using four 10-24 socket-head cap-screws. An installation torque of 6-8 in-lbs should be applied when installing the valve controller display to prevent damage to the enclosure. The motor driver replaces the existing black plastic cover on top of the electric actuator using the existing mounting hardware.

Required clearance behind truck panel:





6 INITIAL SETUP FOR A NEW SYSTEM – MINIMUM SETUP

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

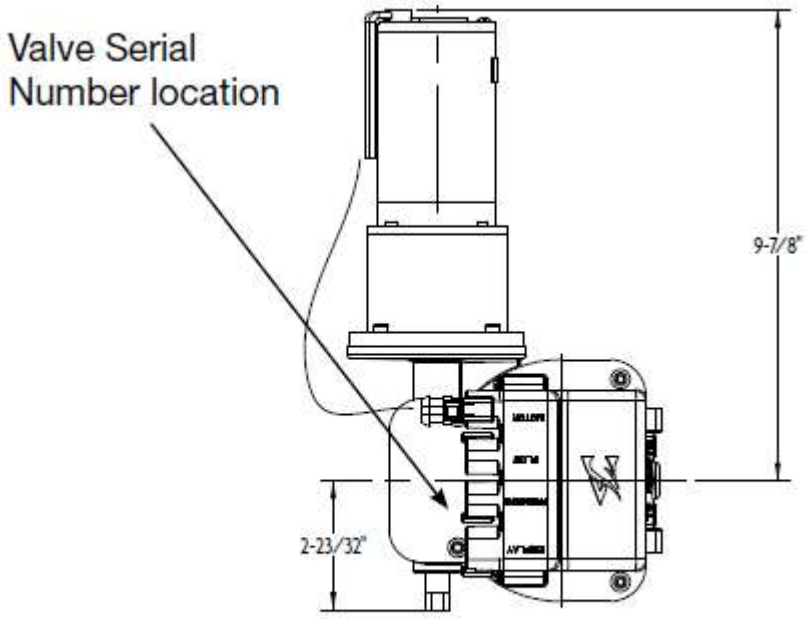
- Assignment of controller to valve
- Valve Calibration

Other options, such as units of measure, valve name, display brightness, flow and pressure settings can be configured at any time via the Setup Menu, but are not required for proper system operation during initial installation.

6.1 ASSIGNING A VALVE

Before controlling a valve, the Style 9333/9335 Navigator Pro must be assigned to that valve. This step tells the display what valve it is controlling. In order for the assignment to take place, the desired valve must be powered and connected to the Navigator Pro controller. Valve assignment will only need to be performed once and can be changed at a later time via the Setup Menu if required. Since the retrofit kit is intended for a One-to-One valve to controller connection, the display will automatically be assigned to the valve. For a different system configuration, refer to the Installation & Operating Manual for the appropriate valve controller. If the display and motor driver are not already assigned, they will request that when they are powered up together for the first time.

When the assignment process begins (either at startup or through the Setup Menu), the Navigator Pro will display a list of serial numbers of all powered valves connected via the CAN network. The serial numbers in the list correspond to the labels affixed to each valve as shown below.



Valve Serial number location

Use the RED and GREEN buttons to scroll through the list until the desired valve serial number is highlighted. Then press the ■ SET button to assign the selected valve.

Note: The Navigator Pro cannot be assigned to more than one valve. The Navigator Pro will remember its assigned valve even when the power is off. Once the Navigator Pro has been successfully assigned to a valve, the screen will proceed to the main operational screen. The Navigator Pro can now be used to open and close the valve. However, valve calibration must be performed in order to display valve position properly.

6.2 CALIBRATING VALVE POSITION

The valve must be calibrated to ensure the position of the valve is accurate.
Press & hold both the open & close buttons for approximately 15 seconds to access the setup menu with the OEM Configuration option visible.
Navigate to the Valve Calibration screen - Menu location: Setup Menu → OEM Configuration → Valve Setup → Valve Calibration.
The screen will display the following warning: “The valve will fully open and close during calibration.” After you have verified that the valve is properly installed to the motor, and there is no danger of damage due to water in the line, press ■ START to begin the calibration process.
The valve will fully open and close twice to calibrate the valve position sensor. After calibration is complete, press the ■ OK button to return to the Valve Setup screen.

7 OPERATIONAL FEATURES

The Style 9333/9335 Navigator Pro Controller has been designed to be intuitive and easy to use. Once configured, the operation is simple. Basic operation of the controller is described below.

7.1 Opening and closing the valve

To open the valve using the Navigator Pro, press the GREEN button. To close the valve, press the RED button. As soon as either button is released, the valve will stop moving. To continue opening or closing the valve, continue to hold the appropriate button.

Wiring Harnesses & Components

Description	Part Number
9333 Valve Controller	93331003
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Power Harness	721359
Motor Driver	128423
Motor Extension Harness	721769
Main Harness – 10’	721618
Main Harness – 15’	721619
Main Harness – 20’	721620
Pressure Transducer Adapter Harness	721770
Flow Sensor Adapter Harness	721771