# AMIAD Water Systems Ltd.
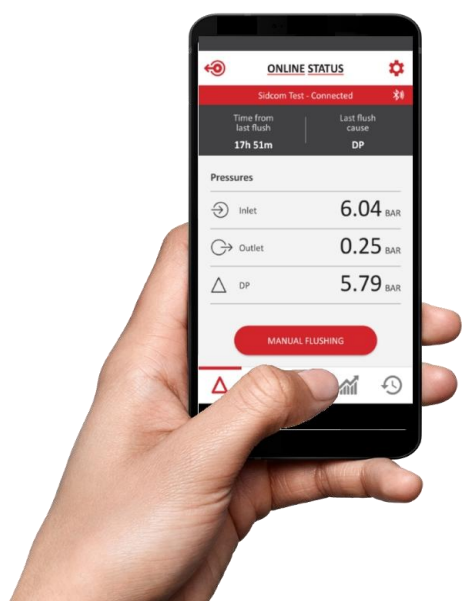
## ADI-P - Smartphone Operated Controller for Filtration Systems



## Installation, Operation and Maintenance Instructions

CE

Original Instructions

Ref: 07.2025

**Patented**

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# Amiad Water Systems Ltd.

## ADI-P – Patented Smartphone Operated Controller for Filtration Systems

Amiad's ADI-P is a smartphone operated controller for filtration systems that is available in two main configurations:

- An integrated device for controlling one or two new filters.
- A standalone device for controlling one or two existing filters.

The ADI-P system consists of two major components: The ADI-P Controller and the ADI-BLE Mobile Application.

In this document, you will find the ADI-P Controller features including updates starting from firmware version #1.1.14.

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# Table of Contents

# Safety First

### General Safety Instructions

➢ The manufacturer's filtration products always operate as components in a larger system. System designers, installers and operators must comply with all relevant safety standards.

➢ Prior to installation, operation, maintenance and/or any other type of action carried out on the controller, carefully read these installation and operation instructions.

➢ During installation, operation and/or maintenance of the controller all conventional safety instructions must be observed in order to avoid danger to the workers, the public and/or to property in the vicinity.

➢ The system is for use for non-hazardous liquids only!

➢ Please note: The filter controlled by the controller enters the flushing mode automatically without any prior warning.

➢ No change or modification to the equipment is permitted without written notification given by the manufacturer or by its representative(s) on the manufacturer's behalf.

➢ Always observe standard safety instructions and good engineering practices whilst working in the filter's vicinity.

➢ Use the controller only for its intended use as designed by the manufacturer only. Any misuse of the controller may lead to damage and may affect your warranty coverage. Consult with the manufacturer prior to any non-standard use of this equipment.

➢ Do not carry out system cleaning and/or maintenance in an explosive atmosphere.

### Installation

#### General

➢ Install the controller according to the detailed installation instructions provided in this manual or in the Quick Guide provided with the filter or controller.

➢ Make sure to leave enough side and top clearance to enable easy access for safe maintenance operations.

➢ Make sure to have suitable lighting at the filter's location to enable good visibility and safe maintenance.

➢ Arrange suitable platforms and safety barriers to enable easy and safe access to the controller without needing to climb on pipes and other equipment. Verify that any platform, barrier, ladder or other such equipment is built, installed and used in accordance with the relevant local authorized standards.

➢ Use only appropriate standard tools and equipment operated by qualified operators when installing, operating and maintaining the controller.

➢ When installation is required in hazardous environment sites, underground or high above ground, make sure that the site design and the auxiliary equipment are appropriate and that installation procedures are carried out in accordance with the relevant standards and regulations.

➢ Ensure walking areas around the installation are slip resistant when wet.

#### Shipment and transporting

➢ Shipping and transporting the controller must be done in a safe and stable manner and in accordance with the relevant standards and regulations.

**Electricity**

➢ Electric wiring must be performed by an authorized electrician only, using standardized and approved components.

➢ The filter should be installed in a manner in which the controller's electrical components are protected from direct contact with water.

➢ When using external power a 1A external fuse and minimum 22AWG wires are required.

## Commissioning

➢ Carefully read this manual prior to operating the controller.

➢ In order to achieve maximum performance and smooth operation of the controller, performing the start-up and first operation procedures exactly as described in this manual is crucial.

## Operation and Control

➢ Do not operate the controller before carefully reading and becoming familiar with its operation instructions.

➢ Observe the safety stickers on the controller and do not perform any operation other than those given in this manual.

➢ Do not operate or use the controller for purposes other than its original design.

➢ The system is for use for non-hazardous liquids only!

➢ Do not carry out system cleaning and/or maintenance in an explosive atmosphere.

➢ Remove the batteries when not in use for few months

## Before any maintenance or non-standard operation

➢ Servicing the controller should be done only by technicians authorized by the manufacturer.

➢ Do not carry out system cleaning and/or maintenance in an explosive atmosphere.

➢ Disconnect the controller and the filter from the power supply and lock the main power switch.

## Preventing damage due to frost

➢ Non-operating periods:

To avoid damage or breakage when temperatures drop, command tubes must be disconnected and drained prior to non-operating periods.

➢ Operating season:

Your ADI-P controller is equipped with a built-in feature that detects low temperatures and increases the number of flushes to avoid freezing of water. You can activate and adjust the settings of this feature in your Settings menu.

➢ When the controller is not in use for a few months (due to winterization or other reason) please remove the batteries from the controller

# Introduction

Thank you for purchasing the ADI-P controller - a smartphone operated controller for filtration systems of up to two filters. The system consists of two major components, the **ADI-P Controller** and the ADI-BLE **Mobile Application**.

The ADI-P Controller can be supplied in two different configurations: as an integral component already connected to the filter(s) and configured for that specific filter model or as a standalone unit to be connected and configured for an existing installed filter(s).

This document covers both product configurations.

# Getting to know the ADI-P

(for detailed information see Getting to know the ADI-BLE application on page 10)

Take a few moments to familiarize yourself with the ADI-P Controller components:
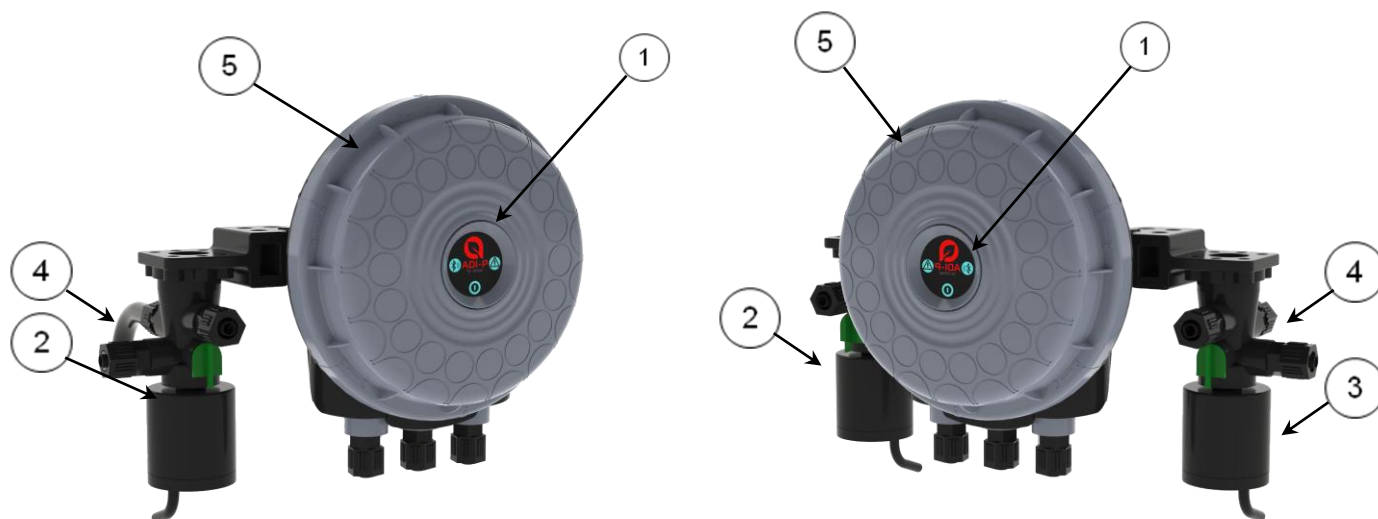


Single solenoid controller                    Dual solenoid controller

1. ADI-P panel for manual flushing button and indication LEDs
2. 3-Way 12VDC solenoid #1 – latch
3. 3-Way 12VDC solenoid #2 – latch
4. Solenoids' manual operation handles (Green)
5. ADI-P cover

# ADI-PLT Model

ADI-PLT model equipped with external water pressure sensors for frozen areas.

1. Two external pressure sensors
2. Protection plug on the central sensor input


**Important remark**:

• When connecting the PLT sensors to the controller body make sure to align the connectors
• Tighten the cable manually (no external tool )

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## Initial operation of the ADI-P Controller:

Open the cover of the ADI-P Controller by turning it counterclockwise [1] and insert four alkaline 1.5V AA batteries, or remove battery slip [2]. The ADI-P Controller starts operating according to its pre-defined default flushing program; flushing at 0.5 bar DP signal or 4-hour time intervals.



## Downloading the Mobile Application:

The free **ADI-BLE** application by Amiad Water Systems is available for download on Google Play or the App Store.

**Scan QR code to download the mobile app:**

*Google Play:*



*Apple Store:*

## Setup and registration of the ADI-BLE mobile app:
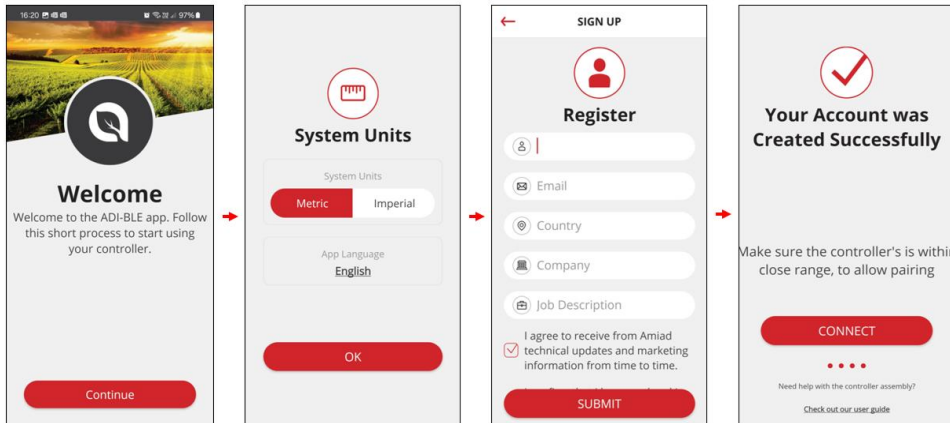


1. Select the applicable SYSTEM UNITS.
2. Register and complete your details, ensure to add valid email and click "Submit".
3. Registration is done. Press CONNECT to complete.
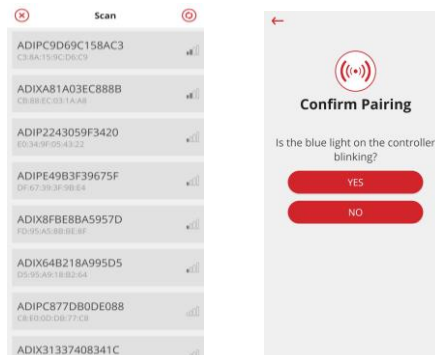


4. Complete the SITE ID form.
   **a. Controller supplied with filter:** Name your site The application reads the filter model and controller's serial number automatically.
   **b. Controller purchased separately:** Name your site, select the filter model and enter your controller's serial number.
   **c.** You will get also field with the next yearly maintenance date that you can approve or edit by clicking this filed

   You may add a site photo by clicking on 

5. Enter the SITE INFO details (optional).

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6. Once done, click SUBMIT to add your new filter to the SITE List

7. In order to view data from your controller, select the active controller from the SITE LIST, marked by the active Bluetooth® icon.
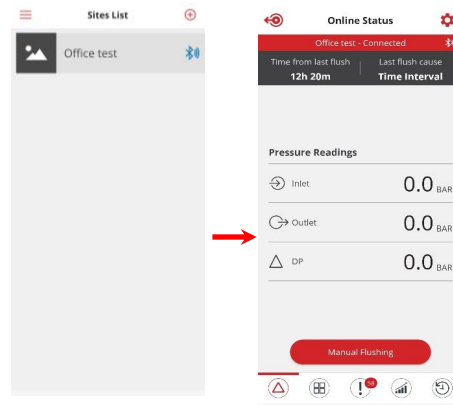


8. The ONLINE STATUS screen appears and relevant data regarding your filter's performance can be viewed.

## Getting to know the ADI-BLE Application:

Take a few moments to familiarize yourself with the ADI-BLE mobile application interface:

Once running and controlling the filter, the application has 5 main screens. Scroll through these screens by sliding to the right or to the left.



k
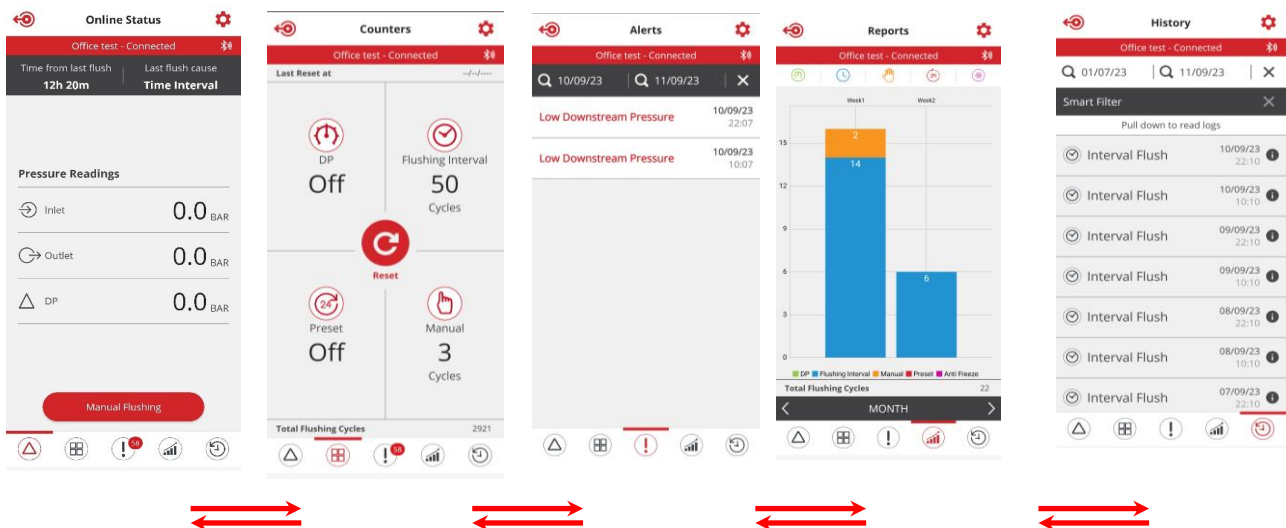
You may also reach the desired screen by clicking on the designated icons that appear at the bottom of the screen.

# Screens Details

**The Online Status screen:**



| | |
|---|---|
| The upper red line | Displays the name of the currently connected controller and the communication status. |
| Time from last flush | The time since the end of the last flush cycle. |
| Last flush cause | The trigger that initiated the last flush. |
| Pressures - Inlet | The current reading of the filter's inlet pressure. |
| Pressure - Outlet | The current reading of the filter's outlet pressure. |
| Pressure - DP | The pressure differential across the filter; calculated by subtracting the outlet pressure from the inlet pressure. |
| Manual Flushing | Press this icon to start a manual flush cycle. |

**The Counters screen:**



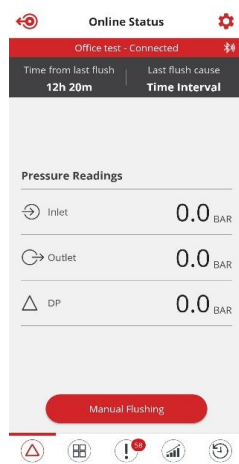| | |
|---|---|
| The upper red line | Displays the name of the currently connected controller and the communication status. |
| Last reset at: | The date of the last resetting of the counters. |
| DP Cycles | The number of flush cycles started due to a DP signal. |
| Interval Cycles | The number of flush cycles started due to the time intervals program. Also count the Antifreeze Protection Intervals Flushes |
| Preset | The number of flush cycles started due to the preset daily start time and the current status of this program. |
| Manual Cycles | The number of flush cycles started due to a manual start command issued by the user. |
| Total Flushing Cycles | The total number of flush cycles started for any reason. |
| Reset Button | Press this button to reset the counters to zero. |

**Alerts screen:**



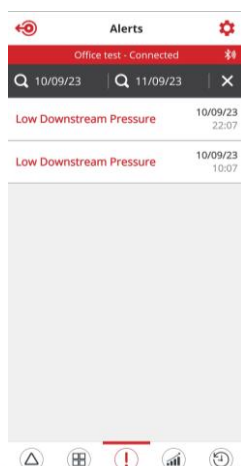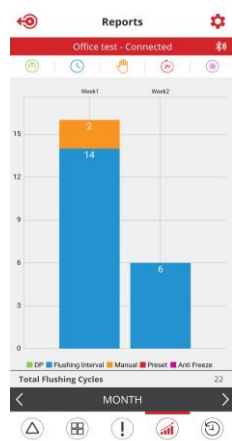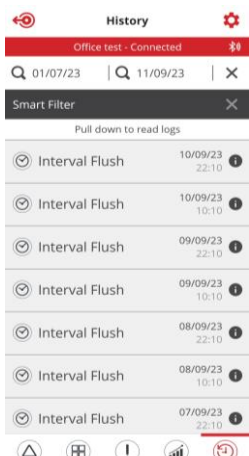| | |
|---|---|
| The upper red line | Displays the name of the currently connected controller and the communication status. |
| The second line | Enables sorting alerts between two dates and resetting an alert. |
| The alerts list (see below) | Display the alert messages according to their occurrence time and date. |

**Alarms and faults list:**

| Alert | Possible cause | Recommended Action |
|---|---|---|
| Low battery | Low battery voltage | Replace all 4 controller batteries |
| Low battery pause | Controller paused due to low battery voltage | Replace all 4 controller batteries |
| High DP alarm | DP value is >= HDA threshold (units: bar/100) | Alert only |
| High DP fault | DP value is >= HDF threshold (units: bar/100) | Alert only |
| Continuous mode alert | Controller exceeded number of consecutive flushes for alerts | Check configuration/check DP: If high, perform manual flush with downstream valve closed, open the filter for inspection |
| DFU failed | Firmware update fail | Validate mobile cellular reception and try again |
| Out of range app connection | Controller out of range during connection session | Get closer to the controller with the smartphone (within Bluetooth® range) |
| Sensor pressure read failed | The number of the sensor that failed to read. Inlet(0), Outlet(1), Piston(2) | confirm tubes proper connection If continues - contact support |
| Capacitor charger start failed | Unable to charge capacitor | Contact support |
| Load capacitor timeout | Capacitor charge timeout | Check battery voltage level, contact support |
| Low downstream pressure | The outlet pressure is less than 1.5 bar | Check the filter and the water system |
| High upstream pressure | The inlet pressure is greater than maximum allowed pressure for the filter | Adjust the water system inlet pressure |
| Anti Freeze Active | Freezing Protection start, as a result of Low Temperature Threshold | |
| Anti Freeze Exit | Stop Freezing Protection procedure | |

**Reports screen:**



| The upper red line | Displays the name of the currently connected controller and the communication status. |
|---|---|
| The second line | Displays icons of the different flush types. Select the desired icons to be displayed on the chart. |
| The chart window | Displays the number of flush cycles according to the selected icons. |
| Total Flushing Cycles | The total number of flush cycles currently displayed in the chart window. |
| The lower black line | Enables the user to select the chart's time span (day, week, month). |



**History screen:**

| The upper red line | Displays the name of the currently connected controller and the communication status. |
|---|---|
| The second line | Enables sorting events between two dates and deleting an event. |
| The black line | Enables filtering events according to the four flush types (DP, Interval, Manual, Preset, Anti Freeze). |
| The events list | Display the events messages according to their occurring time and date. |

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## The Menu screens:

Enter the menu screens by tapping on the Menu icon in the upper left corner of the SITE LIST screen:
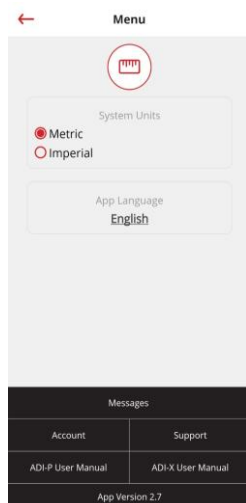
| System Units | Select the system engineering units: Metric or US. |
|---|---|
| Language | Select the application user interface language: English, Spanish, French, German, Hebrew, Italian, Portuguese, Russian, Turkish and Chinese. |
| Account | Displays the registration details of the system: User name, User e-mail, User country, User company and User job description. |
| User Manual | This screen shows the user manual. |
| Support | Contact Us screen. |
| App Version | Displays the current version of the ADI-P Application. |
| Messages | Messages from the Amiad system |

## The Settings screens:

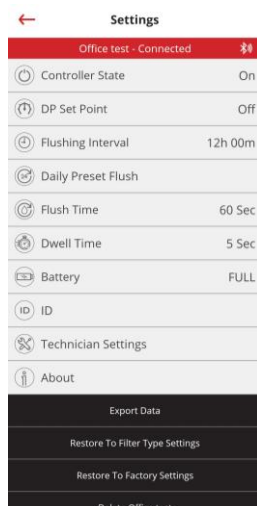Enter the settings screen by tapping on the 'Settings' icon in the upper right corner of any of the 5 main screens:

| The upper red line | Displays the name of the currently connected controller and the communication status. |
|---|---|
| Controller State | Displays the current controller state and allows the user to switch the controller ON and OFF |
| DP Set Point | Displays the DP level for starting a flush cycle and allows the user to enable or disable the DP operation. The recommended setting is displayed at the bottom of the screen. |
| Interval | Allows the user to set the time intervals for flushing and enable or disable the flushing according to time intervals. The recommended setting is displayed at the bottom of the screen. |
| Daily Preset Flush | Allows the user to set specific flushing start times. Start time can be set as daily start times or single-time start times. The user can set up to 8 start times. |
| Flush Time | Allows the user to set the duration of the flush operation. The recommended setting is displayed at the bottom of the screen. |
| Dwell Time | In case the system operates two filters, this parameter allows the operator to set the time delay between the flush cycles of the first and second filters. |
| Battery | Displays the current capacity level of the controller's batteries. |
| ID | Enables the user to set the site's picture, name , next maintenance date ( after 1 year of 10,000 flushes)and ID parameters such as: filter model, controller's serial number and filter serial number. The second screen allows the user to select the type of the water source, flow-rate, the working pressure and the filtration degree of the filter. Press SUBMIT to submit the data. |
| Technician Settings | See the following table. |
| About | Displays the current device ID, App version, Firmware version, Hardware version, Bootloader version, controller installation date. If updated firmware is available this screen prompts the user to update the system by pressing the Update Now button. |

# Technician Settings section:

This section of the application contains the system's basic and fundamental settings. Do not change any of these settings if you are not totally familiar with the specific filtration system, filters and controller. Incorrect settings may cause the system to become nonoperational.

Access to the Technician Settings screens requires a password: 1234.

| | |
|---|---|
| The upper black line | Enables the technician to search for a specific data item. |
| Filter Type | Select the specific filter(s) model controlled by the current controller. |
| Operation Mode | Select the operation mode of this controller.<br>Controller = Primary<br>Primary = the first controller in a chain of controllers or a stand-alone controller.<br>Secondary = a member of a chain of controllers which is controlled by a Primary controller.<br>DP Sensor = set this controller as the source of DP signal for the controller chain. |
| Pause Interval flush if DP is less than | Set a DP value to serve as a minimal DP level for starting a flush cycle by the time intervals parameter. If the DP reading is lower than this value, the flush cycle by time interval will not start. |
| Interval Flush Pause | Enable or disable the operation of the Time Operation Mode Threshold parameter. |
| DP Delay | Set the time that the DP signal should be ON before starting flushing according to a DP signal. This parameter is used to eliminate unnecessary flushing due to a momentary high differential pressure. |
| High DP Alarm Set Point | Set the DP level for issuing a High DP Alarm Message (System Log). |
| Repeated Flushes to Start Fault Mode | Set the number of continuous flush cycles so the ADI-P controller enter to Fault Mode. |
| Cycle Time for Continuous | Set the cycle time for counting a flush cycle as continuous flushing. If the time between two flush cycles is shorter than "Minimum Cycle Time for Continuous Status" – then it's counted as continuous flushing. |
| Action to take in Continuous Fault Mode | Select the Action to Take when Continuous Fault Mode is detected: Ignore:  Ignore the alert and continue flushing according to DP Set Point. Time only: Stop flushing according to DP measurement and flush according to Time Interval only. |
| Ignore DP After Flush | Set the time duration after the end of a flush cycle during which the DP reading is ignored. |
| Cycle Relay Output | Set the time for the end of cycle signal to be ON after the flush cycle ends. |
| Solenoid pulse length | Set the operation of the Output relay to EOC (end of cycle ON), Alarm (set this output as an Alarm output) or Disable (the relay is not active). |
| Valve 2 Mode | It is possible to connect a second solenoid to the system that can operate as a second filter or a downstream valve.<br>Set the task for the second solenoid: Disable, 2nd filter or Downstream.<br>When a downstream valve is selected a new entry field is added to the Technician Screens List for setting the delay time for the downstream valve. |
| | |
| Freezing Protection | Freezing Protection - This function is to prevent from the filter to freeze in low temperature while it connected to water source. Default: Enable |
| Low Temperature Threshold | Freezing Protection - Temperature setpoint to start filter flushing. Default: 4°c |
| Protecting Flushing Interval | Freezing Protection - Flushing Interval while freezing protection Is activated. Default: 60 min |
| Sensor Role Config | Allows the user to utilize all three controller sensors as needed. |
| IO Screen | This screen displays the status of the system's I/Os according to the currently designated filter model:<br>Digital Input 1 type, Digital Input 3 type, the maximal reading of the Inlet pressure, the minimal reading of the Outlet pressure, the Piston pressure and the current Battery Voltage.<br><br>This screen also allows the technician to test the operation of the system outputs:<br>Solenoid 1, Solenoid 2 and the Output Relay. Select ON or OFF. |

**Important note:** make sure to click on the V icon after changing any of the above technician settings.

## Additional Settings screens:

| | |
|---|---|
| Export Data | This screen allows the user to export the controller's data (as an Excel file). The screen displays a list of supported applications for exporting the data (depending on the applications already installed on the user's smartphone. |
| Restore to Filter Type Settings | Allows the user to reset the controller's data and restore the default parameters for the current filter type which is controlled by this controller. |
| Restore to Factory Settings | Allows the user to delete all of the controller's data and restore the factory default settings; The default filter model will be according to the filter provided with the controller, or according to the customer's initial settings. |
| Delete Amiad | Allows the user to delete a site from the smartphone. |

# Download and Export Reports

In addition to the on-screen reports, the ADI-P is capable of logging, storing, downloading, and exporting status and operation data through the user's smartphone.

1. Enter the "Export Data" section of the Settings Screen; In order to make sure that the system exports the latest data, refresh the screen (slide your finger along the screen from top to bottom).
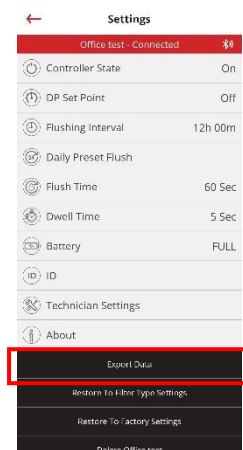


2. Depending on the general communication applications installed on your smartphone, the ADI-P application displays the various options for sending reports.
3. Select the preferred application, the recipient and send the reports.
4. ADI-P sends 5 reports in CVS file format (Excel): *system-id*, *parameters-setup*, *flush-events*, *alarm-events* and *params-setup-audit*.

# Filter Maintenance Reminder

The ADI-BLE mobile application will provide pop-up notifications to users, recommending maintenance for their filtration system. These notifications will include specific spare part kit information and prompt users to contact their dealer for further assistance. The pop-up logic will be triggered by either the flush counter reaching a set threshold (10,000 flushes) or an annual reminder, whichever occurs first.

This feature will increase filter reliability by performing preventative maintenance

a. Flow:

    i. Upon registering their controller in the ADI-BLE app, users will be prompted to input their installation date along with other required data.

    ii. By default, the app will display the installation date upon connection to the controller, but users have the option to customize this setting.

    iii. The pop-up notifications logic will be triggered by either:

- Reaching a preset number of flushes (flush counter).

- Receiving an annual reminder.

- Whichever trigger occurs first will initiate the pop-up notification

    iv. User can press "remind me later" so message will popup again after 1 week or press "done " upon completion

    v. User can check maintenance date or edit it by going to setting and select ID

b. Popup maintenance notification content:

    i. Recommendation for maintenance.

    ii. Specific spare part kit part number and description for the filter type.

    iii. Instruction to contact the dealer for further assistance.

    iv. Link to Amiad Parts Center website – the spare parts kits section

c. In addition, link to Amiad Parts center was added to the ADI-BLE menu page, Amiad Water Systems

Few screen which demonstrates this feature:
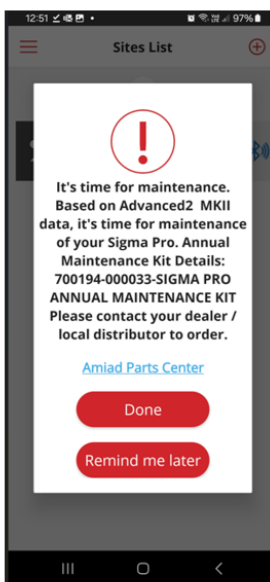


Maintenance
popup - example
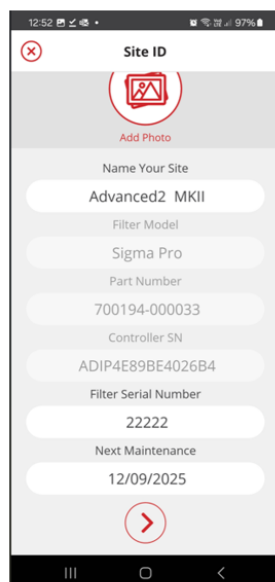
Site ID with the next
maintenance date
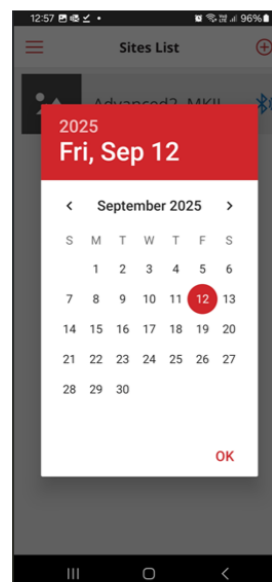
Edit maintenance
date

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# Troubleshooting

The ADI-P Filter Backwash Controller is a crucial component of your filtration system, ensuring its efficient operation. This troubleshooting guide aims to assist you in resolving common issues related to the controller, which is controlled via Bluetooth communication and mobile app.
Please follow the steps below systematically to identify and resolve the problem you are experiencing.
If you have other issues, please contact us adi-p@amiad.com   or via the mobile application support

## Controller /Hardware issues

| Problem | Cause | Check | Recommended action |
|---|---|---|---|
| The controller fails to initiate flushing. | Empty or low battery. | Examine the battery status. | Replace batteries. |
| | Incorrect DP settings. | Inspect the Differential Pressure (DP) across the filtration system. | Adjust DP settings based on water quality and dirt load. |
| | 'Interval flush pause' is ON. | In the ADI-BLE mobile app, go to Technician settings and check 'Interval Flush Pause' status. | If the 'Interval Flush Pause' status is ON, turn it OFF. |
| | 'Action to take in continuous flush' is set to 'Time only' | Check 'Action to take in continuous flush' in the Technician Settings in the ADI-BLE app. | Go to technician settings >> Action to take in continuous flush' >> change from 'Time only to 'Ignore'. |
| | The controller is set as secondary. | Go to Technician settings and check 'Operation mode' status. | If the 'Operation Mode' status is SECONDARY, Change it to CONTROLLER. Reselect filter type. |
| | The controller is in 'Pause Mode' | Check 'Controller State' in the Settings in the ADI-BLE app. | If the 'Controller State' status is OFF, change it to ON. |
| Valve Issues (Open/Close Problems). | Faulty solenoid. | Inspect the solenoid for defects or wiring. | Replace solenoid or repair wiring. |
| | Incorrect control tubes connections. | Check the control tubes schema in the IOM | Connect the control tubes correctly |
| | Faulty flushing valve. | Examine the valve for faults. | Service the valve or replace if needed |
| Controller does not work at all. | Improper battery insertion or connection | Verify battery placement and connections. Check battery | Reinsert battery correctly. Ensure secure connections. |

| | | orientation | |
|---|---|---|---|
| | Battery damage or age | Inspect battery for damage or age. | Replace damaged/old battery with a compatible one. High quality or industrial grade battery. Our recommendation is to replace the batteries once a year |
| | Water entered into the battery compartment | Check if open the compartment and dry the water resolve the issues otherwise need to replace due to water damage | Need to pay attention to protect the product from water when open the compartment to replace batteries Does not covered in the controller warranty |
| Valves Operating Oppositely (Open instead of Close, Close instead of Open). | Solenoid polarity reversed | Ensure solenoids are correctly connected | Reverse the solenoid connections polarity |
| Firmware Update Failed. | The latest Firmware version has not been downloaded to the mobile device | Check in the 'About' section that last firmware version has been downloaded | In the ADI-BLE, go to Settings >> About >> check 'Last FOTA Downloaded' date. |
| | Bluetooth interruption. | Verify Bluetooth connection. Ensure mobile device is close to the controller (few meters) and not disturbed. | Retry firmware update while ensuring constant Bluetooth connection. |
| Sensor failure | Loose connection. | Ensure the sensor tube/wire connection is stable. | Tighten the connection |
| | Sensor malfunction. | Confirm filtration system pressure. | Configure the piston sensor role as an inlet/outlet sensor. Open the mobile app, connect to your controller, and app do the following. Settings >> Technician Settings (password: 1234) >> Sensor Role Config >> Select piston sensor as Inlet or Outlet. Connect the piston sensor to the inlet/outlet tube. This requires FW version 1.4.6 or newer |
| | Excessive negative pressure in the filtration system | Check water pressure in the system with external pressure stat | install anti vacuum valve at the inlet |

| | No signal in ADI-PLT | Check the connectors for blockage | Clean carefully the surface of the connector by air or hand. Remark - Don't use any tool to close the sensor connectors |
|---|---|---|---|
| Flushing by interval does not work. | Interval flush pause is ON. | Go to Technician settings and check 'Interval Flush Pause' status. | If the 'Interval Flush Pause' status is ON, turn it OFF. |
| continuous flush while outlet pressure displays zero | | | Reset to factory settings: Click on restore to factory settings in the settings screen. Go to settings and click on Technician setting. Insert the password: 1234 Click on Filter type. Select a different filter type than currently configured. Click on the V to save: Reenter to filter type settings, select the desired filter type and click on the V to save. |

## Mobile app\User interface issues

| Problem | Cause | Check | Recommended action |
|---|---|---|---|
| Connection Issues. | Bluetooth disabled. Bluetooth out of range. | Ensure Bluetooth range. Move closer to the controller to establish a Bluetooth connection | Enable Bluetooth on mobile device. Restart device - reinsert one battery. |
| | Mobile app Malfunction. | Reset mobile app. | Exit and enter the mobile app. Reinstall app - unload and redownload the mobile app. |
| | Another user is connected to this controller. | Check that no one else is connected to the controller. | Reset device (disconnect power/re insert batteries) or disconnect other. User. |
| | Outdated mobile device operating system. | | Update mobile device operating system version. |

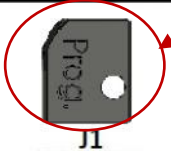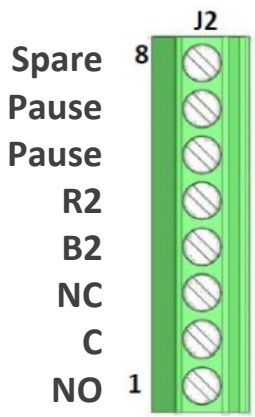| | | | |
|---|---|---|---|
| Controller does not present water pressure. | The controller is set as secondary. | Go to Technician settings and check 'Operation mode' status. | If the 'Operation Mode' status is SECONDARY, Change it to CONTROLLER. Reselect filter type |
| I cannot see history in mobile App | Known issue in older versions | Check for the latest ADI-BLE version on Apple store/Google store. Check for FW version to be 1.4.6 or newer | Update controller's firmware if required |
| I see negative value in my DP reading | tubes may have been connected opposite | Check tubes connection polarity to confirm not opposite | Connect tubes in the right direction for inlet/outlet |
| The Controller issues alerts following firmware upgrade | Filter type configuration might be erased | Check filter type configuration | Go to settings >> Click 'Restore to Filter Type Settings'. |
| I get piston error in my ADI-PLT controller | The default filter type configuration has the piston sensor enabled. | Check filter type configuration | Reinsert battery and then select a filter type with piston sensor disabled such as 'Mini-Sigma 2 PS' |

# Specifications Table

| Item | Description | | Remarks |
|---|---|---|---|
| Applicable filters | Sigma Pro, Mini Sigma , M104LP , M104XLP , M106LP , M106XLP , M108LP , M110P , M102C , M103C , M103CL , M104C , M104CL , MG-110LP , MG-112-M , MG-112-S , MG-114-M , MG-114-S , SK Compact 2", SK Compact air, SpinKlin Nova 3", SpinKlin Nova Plus 4", Spinklin Nova Plus LF, Media, Mini Sigma 2 PS | | Support 2 solenoids  or one solenoid + downstream valve |
| Communication | BLE 4.2 – for local configuration , operation, history, alerts via mobile App | | |
| User Interface | -Via Smartphone Application<br>-manual push button (to initiate flushing) and LEDs | | |
| Power supply | Internal | 4x1.5V AA batteries | |
| | External | 7-14 VDC | 1A external fuse, min 22 AWG wires |
| Temperature range | 4°C to (+)60°C | (+)39°F to (+)140°F | (-)10°C/(+)14°F In case  of ADI-P  LT |
| IP Rating | IP65 | | |
| Weight | 0.5 kg | 1.1 lb | |
| Pressure sensors | 3 Internal Pressure sensors ( Inlet, outlet and Aux/Piston) | |  Aux/Piston: used for single filter installation to optimize flush time duration & flush water volume |
| Ideal Working Pressure | 0-10 bar | 0-150 psi | |
| Solenoid outputs | Support 2 solenoids+  or 1 solenoid+ downstream valve | | 12 VDC latched, 2- Wire Type |
| Chain Controller | Onboard relay Pulse | NO, NC | |
| Digital Inputs | DP Switch, Pause | | |
| Configuration | ADI-P – standard environment<br>ADI-P LT – for freezing conditions | | |
| Standards | FCC 47CFR part 15: 2017, subpart B, Class B<br>ICES-003: 2016 Issue 6, Class b<br>AS/NZS CISPAR 32 :2015 Class B<br>EN 61326-1: 2013, basic immunity requirements, Class B<br>IEC 61010-1 | | |

# ADI-P Terminal Blocks Connections
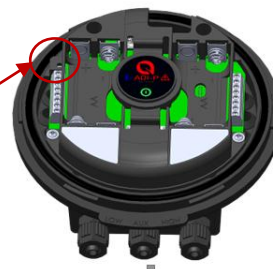
| | Connector Block J1 | | | | Connector Block J2 | |
|---|---|---|---|---|---|---|
| | Power in + | 1 + | | Spare | 8 | Spare |
| | Power in − | − | | Pause | | GND |
| | Spare | DI | | Pause | | Pause In |
| | GND | DI | | R2 | | Solenoid 2 Red |
| | External Dp | DP | | B2 | | Solenoid 2 Black |
| | GND | DP | | NC | | Relay NC |
| | Solenoid 1 Black | B1 | | C | | Relay COM |
| | Solenoid 1 Red | 8 R1 | | NO | 1 | Relay NO |

| 1 | Power In + | Input external power 7-14VDC | 8 | Spare | N/A |
|---|---|---|---|---|---|
| 2 | Power In - | External power GND | 7 | GND | GND |
| 3 | Spare | N/A | 6 | Pause in | Dry contact to pause the controller |
| 4 | GND | GND | 5 | Solenoid 2 Red | Solenoid connection Red wire |
| 5 | External DP | Dry contact input for flush trigger | 4 | Solenoid 2 Black | Solenoid connection Black wire |
| 6 | GND | GND | 3 | Relay NC | Normally closed relay output |
| 7 | Solenoid 1 Black | Solenoid connection Black wire | 2 | Relay COM | Relay common connection |
| 8 | Solenoid 1 Red | Solenoid connection Red wire | 1 | Relay NO | Normally open relay output |

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# Annex A. Chaining ADI-P Controllers:

**General:**

It is possible to daisy-chain several ADI-P Controllers in order to operate a battery of filters' flushing according to a single DP switch (either internal or external).

The DP switch that reads the pressure drop across the battery is the internal DP switch of the first controller in the chain (the Primary) or an external DP switch connected to the Primary Controller. The End of Cycle output of the Primary Controller is connected to the external DP input of the second controller in the chain (the first Secondary) and this controller's EC output is connected to the DP input of the rest. This type of connection can be spanned over as many controllers as needed. (See page 17 – Stage 1: Wires Connection).

When the actual DP switch sends a signal, the Primary Controller starts a flush cycle. Once this cycle is completed the Primary Controller sends a signal through its EC output to the second controller to start its flush cycle, and so on to the last controller in the chain, as illustrated in the following:
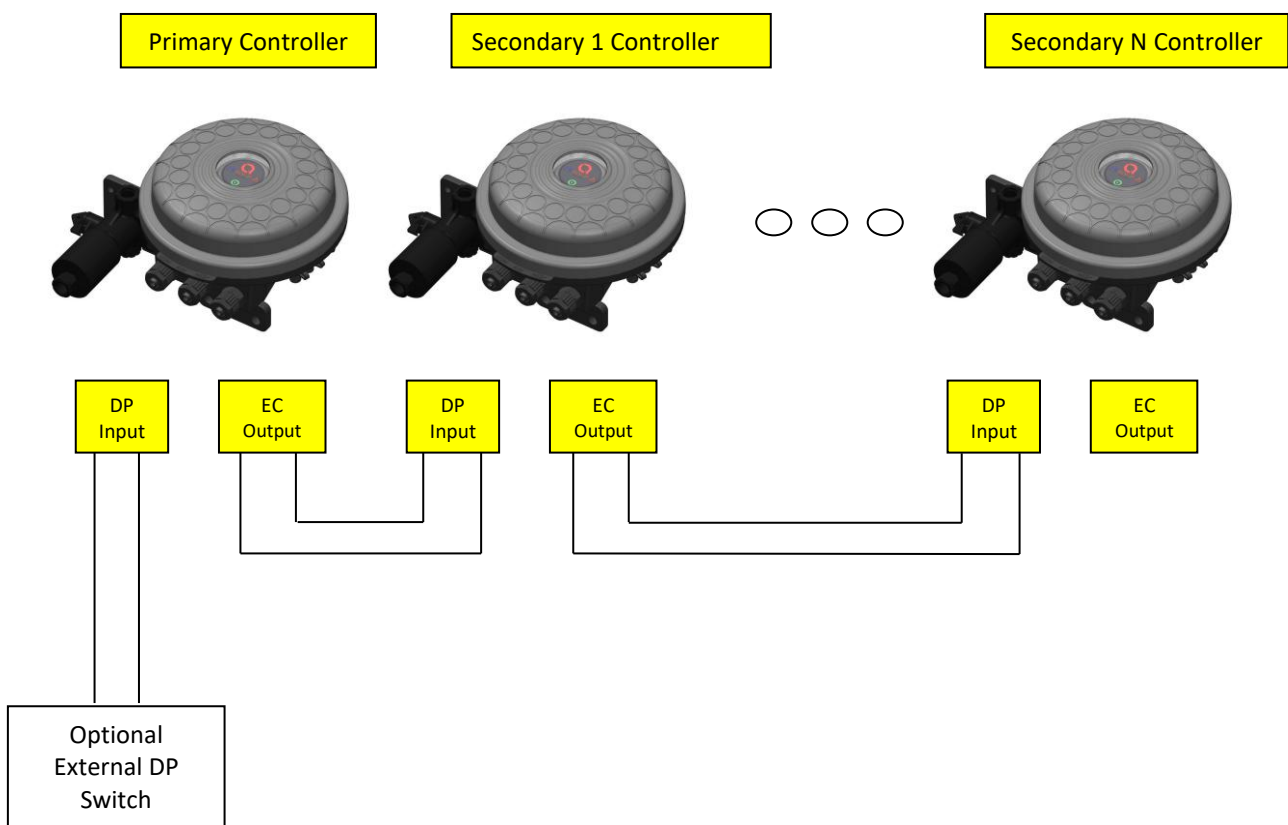


**Important Note:** Please make sure that the DP delay in the chained controllers (Secondary controllers) is set to no more than 5 seconds. This ensures proper transition from the last filter in the first controller to the first filter in the next controller. In the 'Secondary' mode, the controller operates in a 'slave mode'.

# Connection Instructions:

The connecting process has two stages; Stage 1: wires connection.   Stage 2: setting the ADI-P App for chained operation.

## Stage 1: Wires Connection
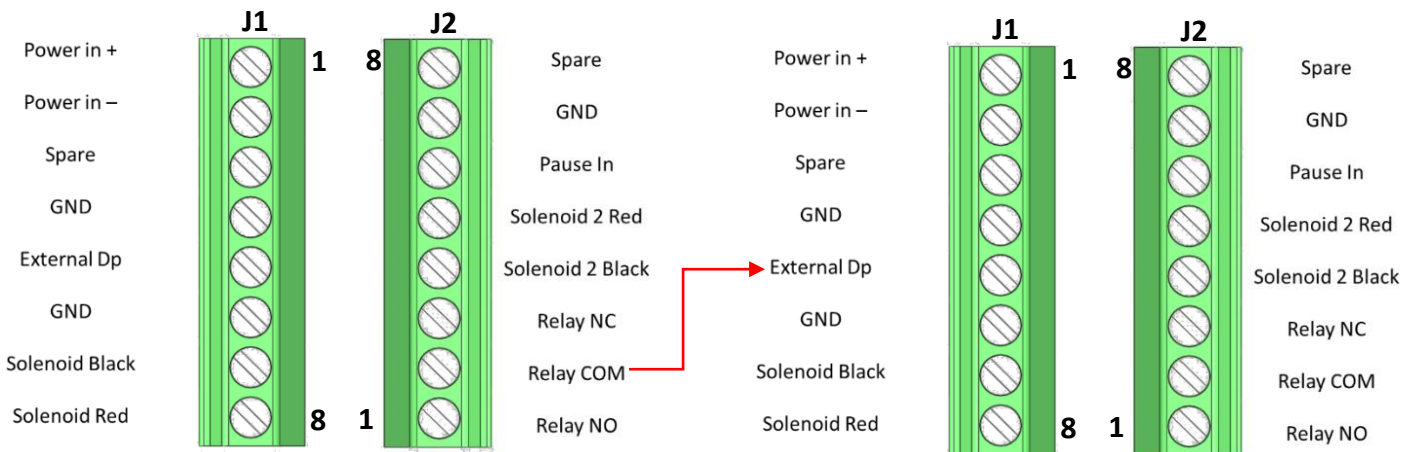


1. Connect between the Primary controller's NO relay output and the Secondary controller's external DP input. **Important:** For your safety and in order to avoid damaging the controller, remove the batteries before starting the wiring process.
2. Make sure that the wires' gauge (the diameter of the cable) used is similar to the solenoid wires' gauge (~4 mm).  This is critical for maintaining the IP65 rating of the controller (dust tight and protected against water projected from a nozzle).

## Stage 2: Setting the Application

To connect the Adi-P App to the Primary controller, perform the following:

A. Click the Settings icon on the top right of the home screen.
B. Scroll down through the Settings screen.
C. Select Technician Settings.
D. Enter the password:1234.
E. Select Mode of Operation.
F. Click on the current status of the controller (generally set to "Controller")
G. Under Choose Mode, select Primary mode for the current controller.
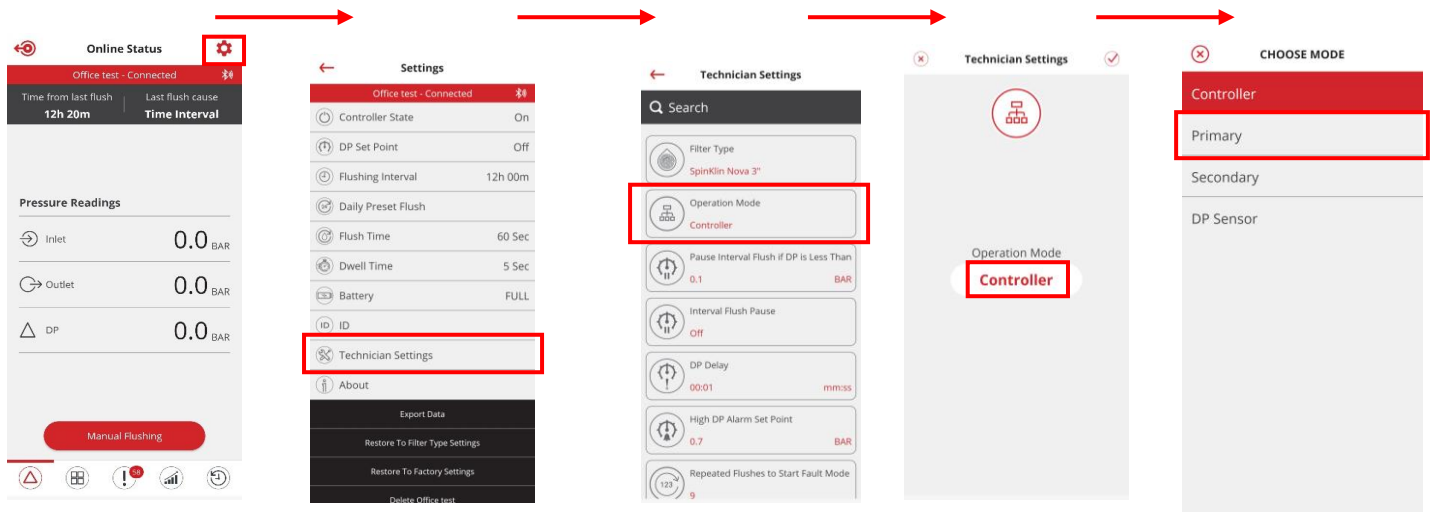


To change from Primary controller to Secondary controller, perform Steps A-F as above, and under Step G, select Secondary mode.

Check the controller's operation by starting a flush cycle through the application or by the controller's MANUAL FLUSHING button.

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# Annex B.
# Connecting the ADI-P Controller to a DC external power source:

### General:

The ADI-P system is powered by 4X1.5V AA consumer alkaline batteries (non-rechargeable, safety approved) and/or by external safety approved external DC power supply 7-14VDC, max 1A (not provided with equipment).

### Safety First:
When connecting the external power supply
- Make sure to comply with all the general and local regulations and standards required for connecting an indoor / outdoor external power source.
- All external connections must be done by an authorized electrician with qualifications to perform this type of work.

### Type of Adaptor (Not supplied by Amiad)

- The adaptor should be a standard DC adaptor that supplies 7-14 VDC at its output connection.
- The system must be protected by a max 1A external fuse and it must use a minimum of 22 AWG wires.

### Connections and Connection Drawing

- The DC output of the adaptor should be connected to the J1 terminal strip of the controller to the: Power In (+) and Power In (−) connectors.
- For backup during power outages, the batteries may be left in place within the controller. DO NOT USE RECHARGEABLE BATTERIES!
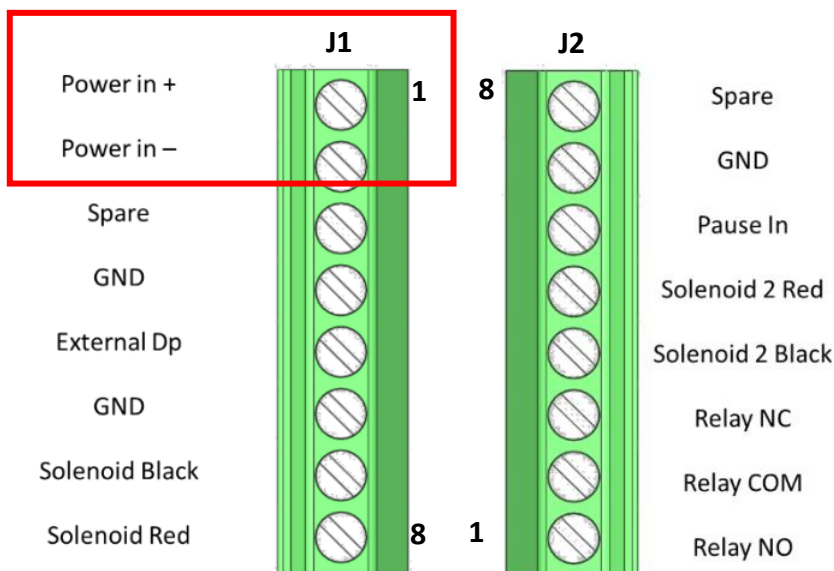
# Amiad Limited Warranty

1. This certificate applies to Amiad Water Systems Ltd. ("**Amiad**") products purchased by you (the "**Buyer**") from Amiad unless specifically agreed otherwise in writing by Amiad. This Warranty extends only to the original purchaser, and is not transferable to anyone who subsequently purchases, leases, or otherwise obtains the product from the original purchaser.

2. Amiad hereby warrants that the products are and will be free from defects in material and workmanship under normal use and service. Amiad warrants that it will correct manufacturing defects in the products, in accordance with the conditions set out in this Warranty.

3. This Warranty is enforceable for a period of 12 months after the date upon which the products were delivered (the "**Warranty Period**").

4. In the event that during the Warranty Period the Buyer discovers a defect in material and/or workmanship in any product or part (the "**Defective Product**"), it shall submit a written complaint to Amiad using Amiad's standard Buyer Complaint Form. For the receipt of the Buyer Complaint Form, the submission of the complaint or any questions please contact your service representative.

5. Upon written demand by Amiad the Buyer shall return the Defective Product - or a sample thereof - to Amiad, at Amiad's cost. If the Buyer ships any such Defective Product, Amiad suggests the Buyer package it securely and insure it for value, as Amiad assumes no liability for any loss or damage occurring during shipment. Provided however that in the event Amiad determines that this Warranty does not apply to such product, Buyer shall promptly reimburse Amiad for such cost (including freight and customs). Any returned product or part must be accompanied by the Warranty certificate and the purchase invoice. It is clarified that the Buyer may not return the Defective Product unless such return was coordinated and approved by Amiad in advance.

6. Amiad's obligation under this Warranty shall be limited to, at Amiad's option, the repair or exchange, free of charge, of the product or any part which may prove defective under normal use and service during the Warranty Period. The provision of a repair or replacement of a product during the Warranty Period will result in an extension of the Warranty Period by an additional period of 12 months, provided that the total accumulated Warranty Period shall in any event be no more than 18 months from the date upon which the products were delivered.

7. This Warranty is valid on the condition that the products are installed according to Amiad's instructions as expressed in Amiad's instruction manuals and according to the technical limitations as stipulated in Amiad's literature or as stated by a representative of Amiad.

8. This Warranty will not apply to damaged or defective products resulting from or related to:

    (i) Fire, flood, power surges or failures or any other catastrophe and/or unforeseen occurrence, such as but not limited to those for which the Buyer is customarily insured for, or any force majeure events;

    (ii) Fault, abuse or negligence of the Buyer;

    (iii) Intake water not meeting the agreed standards, as set forth in a written document, approved by Amiad, or improper storage;

    (iv) Improper or unauthorized use of the product or related parts by the Buyer, including Buyer's failure to operate the product in conformity with the recommendations and instructions of Amiad, as set forth in Amiad's manuals and other written materials, the operation of the product other than by a trained and qualified operator, or improper installation of the product by a third party not authorized by Amiad;

    (v) Performance by the Buyer of maintenance or operation other than in conformity with the recommendations and instructions of Amiad, or other than in accordance with procedures defined in the literature supplied for products (including the timely replacement of requisite parts), and for services provided other than by a trained and qualified advanced operator; or

    (vi) Any alteration, modification, foreign attachment to or repair of the products, other than by Amiad or its authorized technical representatives.

9. In no event shall Amiad be liable to the Buyer or any third party for any damages to property, or for any intangible or economic loss, including loss of profits, loss of customers or damage to reputation, for any damages, including indirect, special, consequential damages, or punitive damage arising out of or in connection with this Warranty, or arising out of or in connection with the product's performance or failure to perform, even if it has been advised of the possibility of such damages.

10. Amiad will be excused for failure to perform or for delay in performance hereunder if such failure or delay is due to causes beyond its reasonable control or force majeure preventing or hindering performance.

11. This Warranty set forth herein is the only contractual warranty given by Amiad and is provided in lieu of any other warranties created by any documentation, packaging or otherwise.

12. Amiad makes no warranty whatsoever in respect to accessories or parts not supplied by Amiad. In the event that Amiad is required to correct a Defective Product or product not covered by this Warranty, it will do so solely in consideration for additional fees.

13. The parties will actively endeavor to amicably settle any dispute arising between them. In the event that the parties are unable to reach an equitable settlement of such dispute, any claim or lawsuit related to the Warranty, its validity execution, its performance be brought before only the courts of Tel-Aviv, Israel. Israeli law will govern the Warranty, to the exclusion of any conflict of law rules.

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CE

**Manufacturer**

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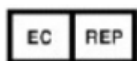
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**EU Declaration of Conformity** https://www.amiad.com/certificatesDownload.asp