

Intelli-Connect™ Mobile FAQ

Mobile Application Frequently Asked Questions



Introduction

Downtime due to unexpected maintenance or equipment failure is expensive. Intelli-Connect™ Mobile, a solution from Columbus McKinnon, provides descriptive and diagnostic analytics to help minimize downtime. Intelli-Connect enables quick and easy programming, maintenance, monitoring, and troubleshooting of overhead cranes and hoists. Using the free Intelli-Connect Mobile App from a smartphone or tablet, users can access detailed information right from the plant floor. With diagnostic information available at their fingertips, users can address issues more quickly, plan maintenance, and ultimately reduce downtime.

Overview

For the best wireless connectivity, the Intelli-Connect Mobile wireless operator (WOP-20) should be mounted on the outside of the cabinet/panel door with a remote mounting kit.

- Magnetek IMPULSE®•G+/VG+ Series 4: Flush mounting kit is recommended
- Magnetek IMPULSE®•G+ Mini: External mounting kit is required

Disclaimer: Before using VFD-controlled equipment, please read and adhere to all guidelines provided in the related technical manuals. Users should be trained, knowledgeable, and fully aware of all hazards associated with crane equipment, including hoists, lifting devices, and electrical controls. When installing Intelli-Connect Mobile, follow wiring practices provided in the VFD technical manuals and all applicable electrical codes. Be sure to remove power to the VFD before installation. Ensure the mounting of all components is secure and adhere to installation considerations and environmental conditions for VFDs.

Jump to [Appendix A](#)

General Product Questions

1. What is Intelli-Connect Mobile?

Intelli-Connect Mobile is comprised of a wireless operator module (WOP-20) mounted on the control panel that is connected to a single Magnetek VFD (hoist or traverse motion) via an ethernet cable. Once linked, the Intelli-Connect Mobile App enables quick and easy programming, maintenance, monitoring, and troubleshooting of VFDs associated with your hoist or crane motion.

- a. WOP-20 can connect to a Magnetek IMPULSE•G+/VG+ Series 4 or IMPULSE•G+ Mini
- b. The app does not allow an operator to start and run the drive.

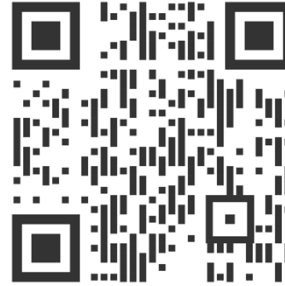
2. Where can I download the Intelli-Connect Mobile App? *

The app can operate on Android™ and Apple® devices. You can scan the QR codes below to download the Android or Apple version of the app.

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3. Is Intelli-Connect Mobile free to download?

Yes. The app is free to download. Purchase of the wireless operator (WOP-20) is required for proper functionality with the app.



Figure 1: Mobile App Icon

4. Can the Mobile App be used on multiple devices?

Yes. The Intelli-Connect Mobile App is tied to your account/user ID on Google Play and the Apple App Store.

5. What is the wireless operator?

The wireless operator (WOP-20) is a module that connects to a Magnetek VFD. It creates a unique wireless network that a user can connect to with the Intelli-Connect Mobile App.

- a. The wireless operator can be ordered using the following catalog numbers:
 - i. **WOP-20:** wireless operator hardware (ethernet cable not included)
 - ii. **WOP-20 KIT:** wireless operator + flush panel-mounting kit + 1-meter ethernet cable + 3-meter ethernet cable
 - iii. **WOP-EXT-0:** wireless operator + external enclosure
 - iv. **WOP-EXT-1M:** wireless operator + external enclosure + 1-meter ethernet cable
 - v. **WOP-EXT-3M:** wireless operator + external enclosure + 3-meter ethernet cable

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Figure 2: Wireless Operator (WOP-20) and External Enclosure (WOP-EXT)

6. What do the LEDs on the Wireless Operator mean?

Wireless Operator		
Drive LED (Left Side)	Wi-Fi LED (Right Side)	Status
Both Blinking RED at the same time		WOP-20 cannot communicate with the VFD
Both Solid Green at the same time		WOP-20 Datalogging Flash Memory is being initialized or erased
-	Rapid blinking GREEN	Wi-Fi Access Point is broadcasting, but no device is connected
-	Slow blinking GREEN	At least one device is connected to Wi-Fi Access Point
Blinking GREEN	-	VFD Idle (no fault, no alarm)
Solid GREEN	-	VFD Running (no fault, no alarm)
Alternating GREEN and RED	-	VFD Running with Alarm
Solid RED	-	VFD Fault
Alternating GREEN and RED		WOP-20 firmware is reporting an internal error condition. <ol style="list-style-type: none"> Pressing the hidden button under the 'P' in "WOP-20" will begin the advanced troubleshooting feature in which the LEDs will indicate an error code and error location information. Please contact customer service for support. Reboot the WOP-20 by disconnecting it from the drive or by pressing the button under the 'P' in "WOP-20" and the button under the Magnetek logo at the same time. The last known error code is also indicated on the Connection page in the app.

7. Have there been any updates to the Intelli-Connect wireless operator WOP-20 hardware?

Yes.

0504.00 [July 2021] - First production release with data logging

0505.00 [October 2021] - Connectivity performance improvements

0506.00 [March 2022] - OTA update certificate change required

0507.13 [June 2022] - Performance improvements by limiting connection to one device at time

0508.00 [November 2022] - OTA update certificate change required

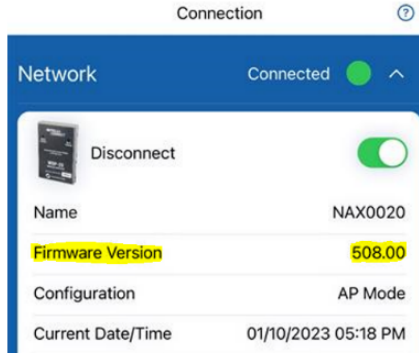
0509.00 [February 2023] - Firmware updates are now received from Intelli-Connect Mobile App instead of a remote server

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Connect to the app and check the firmware version on the connection page. Please see Appendix A below to update your WOP-20 firmware.

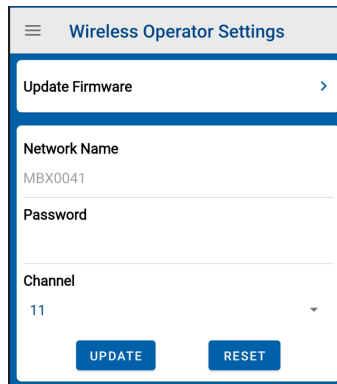


8. How secure is this connection?

The wireless operator (WOP-20) Wi-Fi network uses WPA2 security protocol and is set with a unique SSID username and password from the factory. Users can change the network name and password from the “Settings” page of the Intelli-Connect Mobile App. For example, you may want to rename the WOP-20 network name to “Crane 10 – Hoist 2” to provide better clarity about the equipment you are connecting to.

NOTE: The WOP-20 **default network** can be found on the WOP-20 decal.

NOTE: The WOP-20 **default network password** is “magnetek”



9. Do I need to install the wireless operator outside of the cabinet?

Yes. The wireless operator (WOP-20) creates a Wi-Fi signal. For the best signal strength, it is recommended that the wireless operator is installed on the outside of the panel or cabinet. A panel mounting kit can be used to mount the wireless operator.

- WOP-20 KIT (113-16049)** WOP-20 + flush panel-mounting kit + 3-foot ethernet cable + 10-foot ethernet cable
- DLS4-RMT-OPR-KIT (144-25409)** flush panel-mounting kit + 3-foot ethernet cable + 10-foot ethernet cable
- WOP-EXT-0 (114-16363)** WOP-20 + external enclosure
- WOP-EXT-1M (114-16364)** WOP-20 + external enclosure + 1-meter ethernet cable
- WOP-EXT-3M (114-16365)** WOP-20 + external enclosure + 3-meter ethernet cable

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10. What is the range of the Wi-Fi signal created by the wireless operator?

The Wi-Fi signal that connects a Magnetek VFD to the corresponding phone or tablet will operate best at distances of 100 feet or less.

11. I lost the network password. How do I reset?

A button is hidden behind the 'P' on the WOP-20 overlay on the wireless operator. Press and hold the 'P' button for 15 seconds. After 15 seconds, both LEDs will illuminate in amber. Release the button, and the SSID/password will reset to factory default.

NOTE: If you have an external enclosure mounted WOP-20, you will need to remove the WOP-20 from the enclosure.

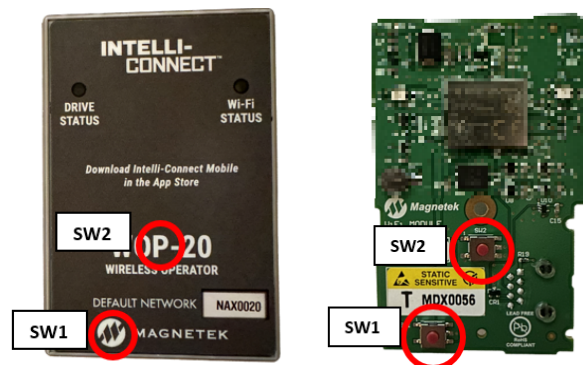


Figure 3: WOP-20 Reset Buttons

12. Can I use Intelli-Connect Mobile if I already have a Magnetek DataLogger Series 4 (DLS4) installed?

The WOP-20 is designed to include data logging functionality. Users can install the wireless operator in place of a DLS4.

WOP-20	DLS4
Uses Logging Time as Timestamp	Uses Clock as Timestamp
~30 hours of trend logs	~180 hours of trend logs
400 faults	400 faults
400 alarms	400 alarms
5000 runs	5000 runs

13. Is Intelli-Connect Mobile compatible with Columbus McKinnon wire rope and chain hoists?

Yes. Intelli-Connect Mobile is compatible with select Columbus McKinnon wire rope and chain hoists equipped with Magnetek-brand IMPULSE•G+/VG+ Series 4 and G+ Mini VFDs. These include the following Columbus McKinnon products:

- CM® Lodestar® VS electric chain hoist (mounting hardware available for field upgrades)
- Shaw-Box® SK and 800 wire rope hoists
- Yale® YK, Y80, Cable King, and LodeKing LT wire rope hoists
- STAHL® SH and AS wire rope hoists, STF electric chain hoist

Hint: You can change the “Movement Type” in the settings page of Intelli-Connect Mobile to customize the hoist image presented on your connection page.

14. What Apple devices are compatible with Intelli-Connect Mobile?*

iPhone and iPad operating system (iOS) requirements are specified for each release in the app information section of the Apple App store.

15. What Android™ devices are compatible with Intelli-Connect Mobile?*

The supported OS versions are Android 10 and above. Android 10 support will be deprecated beginning in 2024. Google Play will not allow you to install the application if your device does not support the operating system requirements.

NOTE: Android Fragmentation

Different smartphone brands run on the Android operating system, but not every manufacturer uses the same software. Manufacturers have been known to make modifications to the Android operating system that occasionally cause parts of the API (application programming interface) to function differently. Specifically, installed apps that were coded with respect to Google API documentation may not function correctly. This functionality error, due to operating system modifications, is less likely to occur in newer Android phones.

16. Does the Mobile App include manuals?

Yes. The app has the latest user manuals available, which can be found in the “Support” section of the app. Currently, the app provides access to the manuals listed below.

- a. IMPULSE•G+ & VG+ Series 4 Technical Manual #144-23910
- b. IMPULSE•G+ & VG+ Series 4 Quick Start Guide #144-27514
- c. IMPULSE•G+ Mini Technical Manual #144-25085
- d. IMPULSE•G+ Mini Quick Start Guide #144-25543

17. Does the wireless operator or Mobile App allow you to create parameter backups?

Yes. Users can store a parameter set locally in the wireless operator hardware or store parameter sets in the smartphone or tablet.

18. Can I send files to aftermarket support?

Yes. The Mobile App allows users to attach parameter files (.parx) and email them to the aftermarket support group to help with setup and troubleshooting. The support team can then send the (.parx) files back to users to be downloaded into the Magnetek VFD.

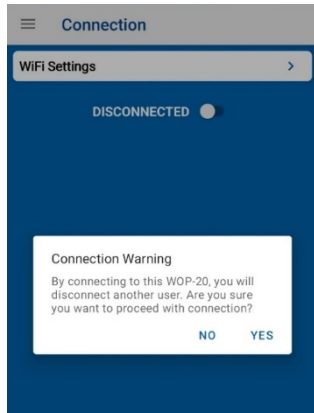
19. Why does the app display a Connection Warning message?

The WOP provides 1:1 data access for client device connections. If another user is currently connected to the WOP, the app will display a message informing you that another device is already connected. Your app will then ask you if you want to disconnect the other user from the network (**Connection Warning**). After selecting Yes, the WOP will disconnect the other user and attempt to connect to your device.

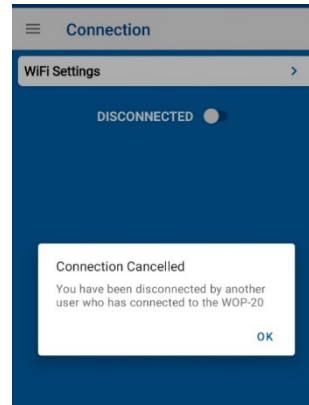
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Connection Warning



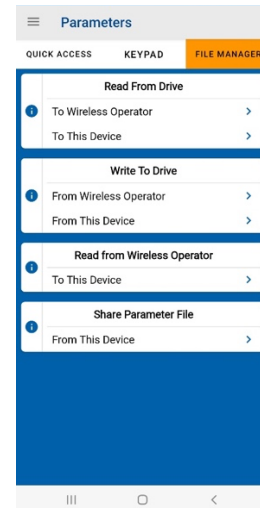
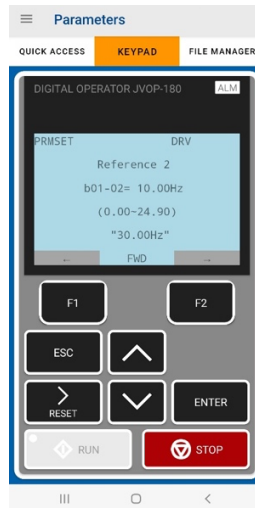
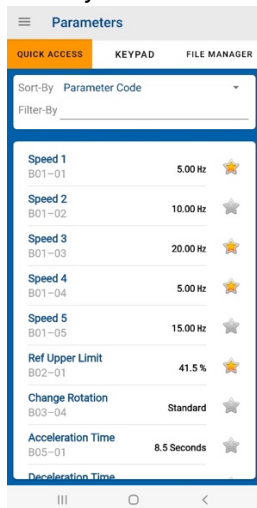
Connection Cancelled

If you are connected to the WOP and another user wants access to the WOP, they can take over your connection. In this case, the app will notify you with a message stating that you have been disconnected by another user (**Connection Cancelled**).

20. What does the Parameter functionality provide?

Wirelessly modify parameters and configure a drive from the plant floor. Store a record of parameter configurations and restore those configurations at a later date. Functionality includes:

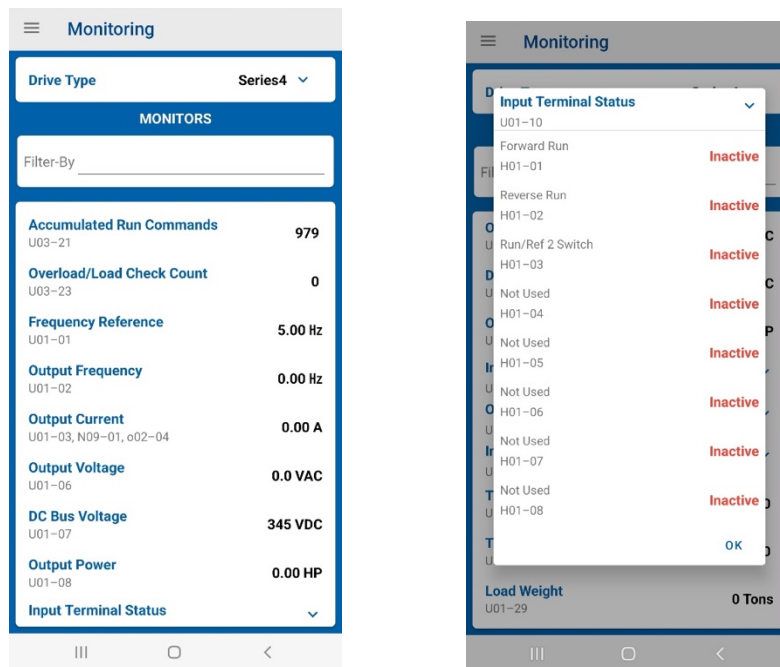
- Quickly view and update the most commonly modified VFD parameters
- Use the keypad emulator to gain full access to VFD parameter modifications
- Store a parameter set locally in the wireless operator hardware or store parameter sets in the smartphone or tablet
- Write previously stored parameter set files back to the VFD
- Email the parameter set files and open them in the IMPULSE®•Link 5 software tool for your PC



21. What does the Monitoring functionality provide?

Live monitoring continuously pulls data from the wireless operator and the Magnetek VFD. Users can monitor signals as they change or review status bits to help identify the drive's state of operation or to troubleshoot an issue with sequencing. Functionality includes:

- Monitoring of operational data
- Monitoring of drive status bits
- Monitoring of multi-function terminals
- Updates every ~100ms



22. What is Event and Event History data logging?

The wireless operator continuously monitors the VFD, collecting data each time the VFD is commanded to run or if there is a fault or alarm. This data is then stored in an event log in the wireless operator. This data can be uploaded to the app and viewed. This data can also be emailed and opened in the IMPULSE• Link 5 software for your PC. No setup is required.

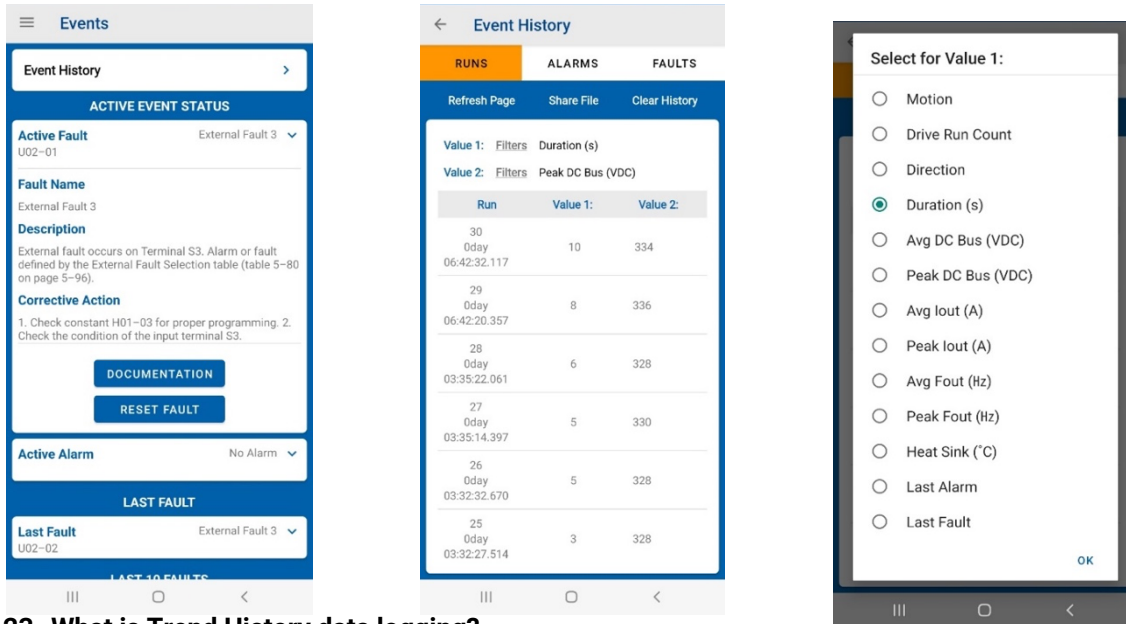
Functionality includes:

- View active faults and alarms, including description and corrective action steps
- Ability to reset active faults
- View List of Runs, Alarms, and Faults, including two side-by-side data values for comparison
- Custom selection of which values to view
- Selecting a specific run: View operational data accumulated during the run
- Selecting a specific fault or alarm: View operational data at the time of the fault or alarm

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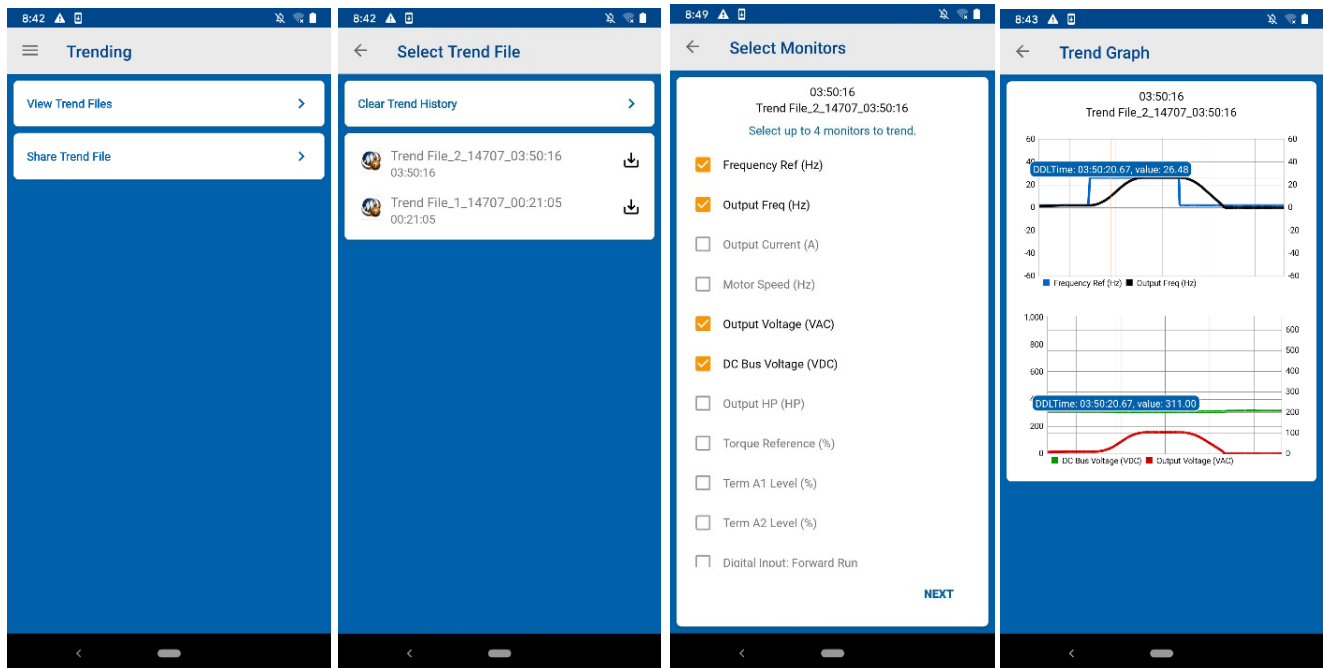


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23. What is Trend History data logging?

During a run, operational data is stored in the wireless operator at ~100ms intervals. Once this data is uploaded to the app, trending allows the user to select specific monitoring parameters within the VFD and display that data on a graph in both landscape and portrait mode. The trend files can also be saved and shared with our technical support team or opened and viewed using the IMPULSE® Link 5 software for your PC.



- 24. How is the Remaining Service Life of the hoist calculated? Do I need additional hardware?**
- a. A load cell (not included) needs to be connected to an analog input of the Magnetek VFD.
 - b. The feedback from the load cell and the hoist classification are used to estimate the Remaining Service Life.

From there, users can monitor usage and remaining hoist life, plan maintenance, and prepare for modifications, upgrades, and replacements.

The input signal to the Magnetek VFD from the customer-supplied load cell could be 0-10V, -10-10V, 0-20mA, or 4-20mA, depending on which analog input channel is available and which drive is being used. Options include:

IMPULSE-G+ Mini

AI1 = 0-10V only

AI2 = 0-10V, 4-20mA, or 0-20mA

IMPULSE-G+/VG+ Series 4

AI1 = 0-10V or -10-10V

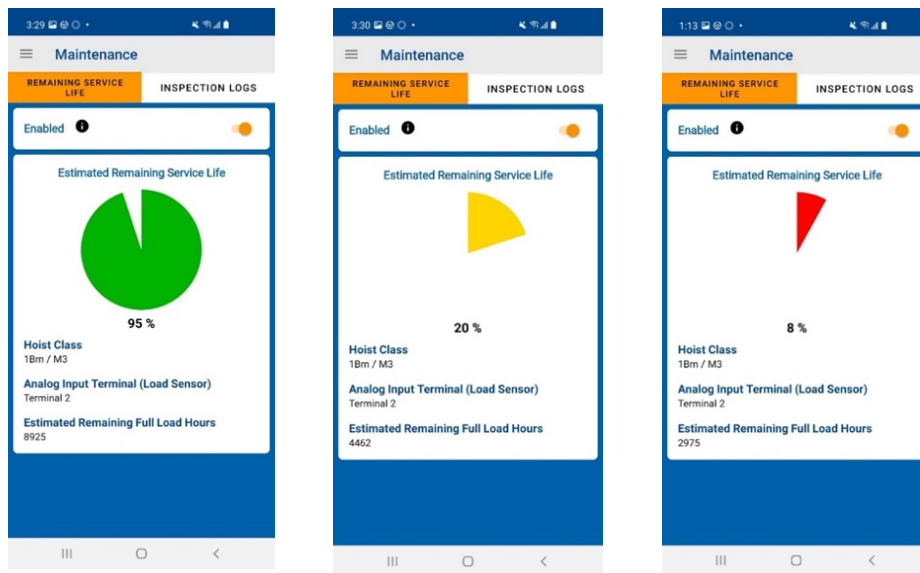
AI2 = 0-10V or -10-10V

AI3 = 0-10V, -10-10V 4-20mA, or 0-20mA

During setup, users configure the analog input used and program the hoist classification:

1. Analog input channel the load cell is wired to
 - a. Series 4: 1, 2, or 3
 - b. G+ Mini: 1 or 2
2. Hoist class from the manufacturer

The load cell and VFD need to be configured by scaling the load cell signal with the VFD ratings.



25. What is the Inspection Log?

Users can keep track of inspections, maintenance, and modifications made to the hoist or VFD parameters.

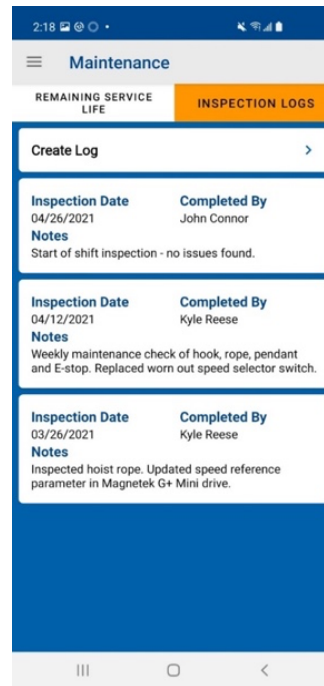
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The inspection log allows users to:

- Digitally store inspection logs
- Create, edit, and delete the inspection logs and record parameter changes
- Up to 24 logs (will rollover)



Appendix A

WOP-20 Firmware Updates

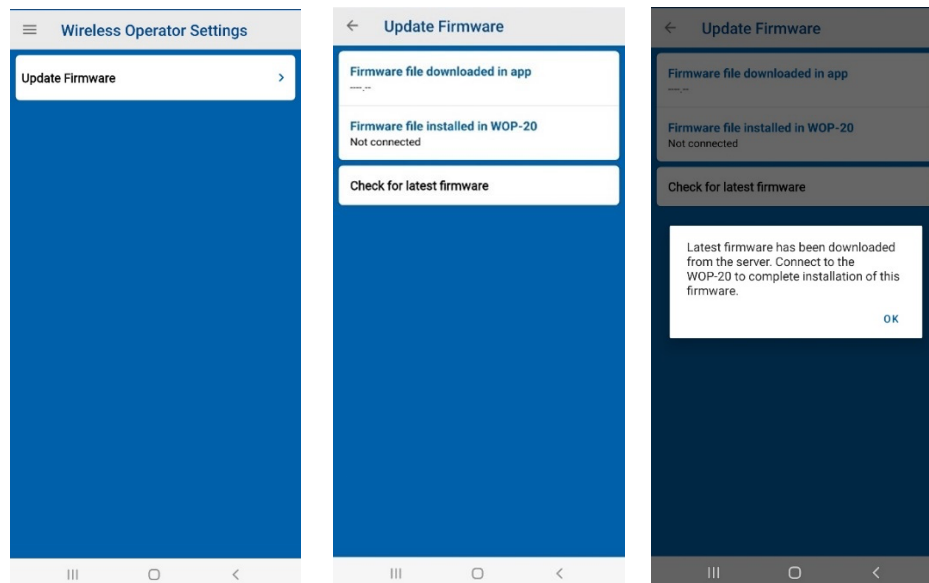
If your WOP-20 firmware version is 0508.00 or prior, please contact your local sales representative or Magnetek support to get your WOP-20 hardware updated:

Telephone: 1-866-MAG-SERV
Email: field.service@magnetek.com

If your WOP-20 firmware version is 0509.00 or later, you can check for firmware updates in the Intelli-Connect Mobile app settings page. Please see below for instructions:

OTA Firmware Updates via Mobile App

1. Before starting the OTA update, please ensure you have the latest firmware file that is available from CMCO. To check for the latest firmware file, make sure you are connected to a Wi-Fi or cellular network with internet access and open the app.
2. Navigate to the 'Settings' page > select 'Update Firmware' > select 'Check for latest firmware'. If you have internet access, the latest firmware will be downloaded to your device.



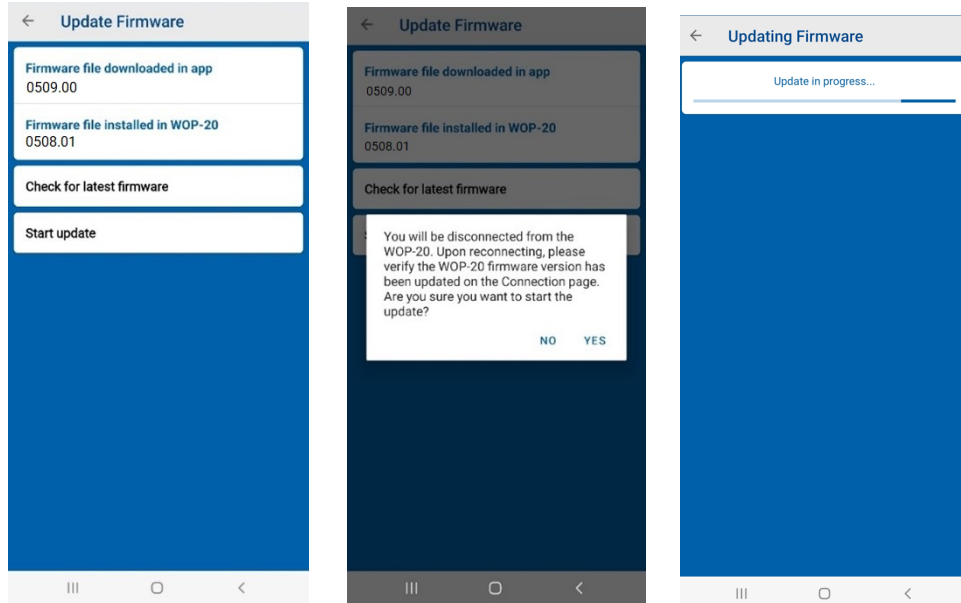
3. Now that you have downloaded the latest WOP-20 firmware, connect to the WOP-20 network as normal.

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4. Navigate to 'Settings' page > select 'Update Firmware' > select 'Start update'. When prompted, confirm that you want to start the update.



5. The WOP-20 will begin the update process and, if successful, will reboot itself. The app will be disconnected from the WOP-20, and you will be taken back to the Connection page where you can reconnect to the WOP-20 and verify the new firmware version.



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