F200 Quick Start Guide

Thank you for purchasing a Falcon F200. This guide describes how to install and configure your unit. Before you begin to install and configure your device, consult rletech.com to ensure you're working with the most recent version of documentation for this product.

If you need further assistance, please access the F200 support page on our web site, email our support staff directly - support@rletech.com, or call us at 800.518.1519.

Falcon

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RLE Technologies

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Installation Supplies

Included with the F200
F200 device
Network cable
USB cable; USB mini B to USB A
5V USB wall wart

Available from RLE, sold separately
Temperature sensors
Temperature/humidity sensors
Conductive fluid or chemical sensing cable, plus leader cable kit and EOL terminator
1U rack mount kit

Network Communications Information
The F200's serial number is found on the back of the unit, on a small white sticker located under the connections for the digital inputs.

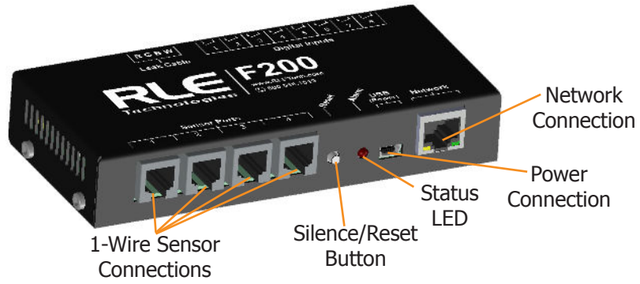
- F200 Serial Number_____

Consult your IT administrator and determine the following network settings for your F200:

- IP Address _____
- Subnet Mask _____
- Default Gateway _____

** Wire all connections, sensors, and power to the F200 first - then access the web interface to configure the device and designate parameters and notification methods for your wired sensors, inputs, and relays.

F200: Front Connections, Silence/Reset Button, and LED



1-Wire Sensor Connections

Plug in your temperature and temperature/humidity sensors. They click into place in the sensor ports on the front of the unit.

Power Connection

The F200 is powered through its mini USB port. Using the included cable, plug the mini end of the USB cable into the power jack on the F200. Plug the enclosed USB wall charger into a standard wall outlet and plug the UBS cable into it. The F200 can also be powered by a USB connection on a server or another computer - just be sure the computer is plugged into a wall outlet, preferably one protected by a UPS.

Network Connection

Plug the network cable into an available network port and then into the network connection on the F200.

Status LED

There are a variety of alarm and alert patterns and colors programmed for the F200's LED. Use the following chart to determine which alarms are active.

Blink Pattern	Status Description	
Solid Green	Normal status - no alarms are present	
Lt. Blue/Blue	Alarm - Leak detection cable break	
Lt. Blue/Off	Alarm - A leak has been detected	
Red/Off	Alarm - Temperature	
Red/Blue	Alarm - Humidity	
Magenta/Off	Alarm - Digital input	
Yellow/Off	No network connection	
Yellow/Magenta	Debug connection is active	
Yellow/Lt. Blue	Configuration mode is active	
White/Off	Unit is booting*	* Do not access or configure the F200 while these alerts are active.
Mixed	Firmware update is executing*	
Red/Magenta	Call RLE - the F200 has an internal error	

Alarm Silence/Reset Button

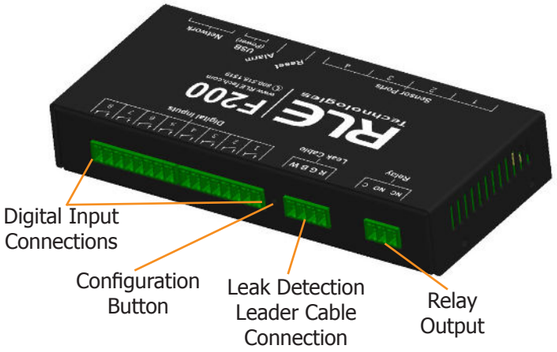
If the audible alarm is active, push this button to silence it. Use the web interface or LED to determine the alarm condition. Advanced functions are also assigned to this button - consult the support section of RLE's website for more information.

F200: Rear Connections and Configuration Button

Digital Inputs

The F200 can monitor eight digital inputs, each of which connects to the F200 through a 2-wire connection on the back of the unit. When you're looking at the back of the unit, note that input 1 is on the right side of the terminal blocks and input 8 is on the left side of the terminal blocks.

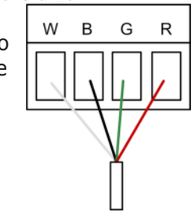
To connect your digital inputs to the F200, loosen the screws on the appropriate slots on the terminal block connector and insert the two wires from your digital input - one in each slot. Tighten the screws to secure the connections.



Leak Detection Sensing Cable

Since leak detection sensing cable cannot connect directly to a controller, leader cable is used to connect leak detection cable to the F200.

1. Remove the 4-pin terminal block connector from the back of the unit.
2. Insert the four stripped wires of the leader cable into the appropriate slots in the terminal block connector - from left to right: white, black, green, and red. Tighten the screws on the terminal block connector to secure the leader cable. Plug the connector - with the wires in the correct order - into the leak detection leader cable connection.
3. Unscrew the EOL from the end of the leader cable.
4. Attach the length of sensing cable to the leader cable.
5. Route the sensing cable according to your cable layout diagram.
6. Secure the EOL to the unoccupied end of the sensing cable.



Relay Output

The F200 has one relay output - use this to control an external device in the event of an alarm condition. Loosen the screws on the appropriate slots on the terminal block connector and insert the wires for your relay output into the correct slots - NC-NO-C. Tighten the screws to secure the connections.

Configuration Button

The configuration button is located on the back of the unit and is used for advanced troubleshooting. Consult the support section of RLE's website for more information.

Mount the Controller

Once all connections have been wired to the F200, mount the device in an appropriate location. RLE recommends a secure mounting option, through either the keyhole cutouts on the enclosure or through the optional 1U rack mount kit.

Establish Communications

Through DHCP, the F200 can be set up to communicate on your network.
**Please NOTE: If DHCP is not available on your network, the F200 will default to an IP address of 10.0.0.188. If this is the case at your facility, skip steps 1-3, enter the default IP address into your web browser address bar, and proceed to step 4.

1. Plug the enclosed network cable into an available network port, and then into the Network connection on the F200. As soon as you plug the network cable into the powered F200, DHCP assigns the F200 an IP address.
2. Using a computer running on the same subnet as the F200, open a web browser. In the web browser's address bar, type rle-serialnumber/ where serial number is the actual serial number of your F200 - for example, rle-a005ff/. **Be sure to place the backslash after the serial number. This will ensure the browser executes a DNS lookup instead of a web search.**

3. Press enter. The browser will find the newly installed F200 and allow you to access the F200's web interface.
4. You may either leave the IP address as it is or change it to an IP address provided by your IT department. If you'd like to change the IP address, click

the Setup tab and then click on the Network link. Type the desired address into the IP address field and click the Save Settings button.

Web Interface

Dashboard

The Dashboard is your main point of contact for the F200. Accessible from any web browser or mobile device, the Dashboard display includes the status of all sensors, digital inputs, and sensing cables connected to and monitored by the F200.

As you connect sensors to the F200, their readings appear on the Dashboard. If you have leak detection cable connected to the F200, you will need to use the Inputs tab on the Setup menu to enable the leak detection monitoring. Then it too will appear on the Dashboard. Other items that can be configured to display on the Dashboard include digital inputs, a button to control the relay output, and displays from IP web cameras. Configure these items on the Sensors, Inputs, and Reporting tabs of the web interface.

Setup Menus

Use the menus in the Setup tab to configure your F200. When you begin typing changes into any of the fields, they will turn either green to indicate your changes are acceptable, or red, to indicate your changes cannot be submitted. If a field turns red, you've likely typed more characters than the field can accept, or you've entered a character that can't be used in that field. Once you delete the excess or offending character, the field will turn green again.

When you edit a section, a Save Settings button appears at the bottom of that section. Click this button to save your changes. **Changes will neither be saved nor implemented until you click the Save Settings button.**

Network

Use the network tab for settings including the device name, NetBios name, IP address, primary DNS, and NTP server.

The NetBios name is used to identify resources on a local network. The default NetBios name is the F200's serial number. The F200's NetBios name can also be used - only on a local network - to quickly access the F200's web interface. Edit the NetBios name as you'd like - it must be 15 characters or less, in all capital letters. Save your changes. Then, in the web browser's address bar, type rle-netbiosname/ and press enter - but replace the netbiosname text with the actual NetBios name of your F200. For example, the NetBios name of the F200 is SERVERROOM, type rle-SERVERROOM/ in the address bar. **Place a backslash after the NetBios name.** This ensures the browser executes a DNS lookup instead of a web search. Press enter to access the web interface. **Once you customize the NetBios name, you can no longer use the "Establish Communications" directions located on the front page of this Guide.**

You can choose to use DHCP to obtain an IP address, or to assign the F200 a static IP. If you choose static IP, fill in the blanks with information provided by your network administrator and remember to save your settings.

Sensors

Use the sensors tab to configure information, alarm parameters, and alarm notification (email, audible, activate relay output, etc.) for each 1-wire sensor that is currently connected to the F200.

Inputs

Leak Detection

The F200 monitors up to 200 feet of leak detection cable, configured in a single zone. **If you have leak detection cable connected to the F200 you will need to use this menu to enable the leak detection monitoring.** Once leak detection is enabled, the leak detection cable icon will appear on the F200's Dashboard.

Use the inputs tab to set the sensitivity for the cable - if you select high sensitivity, the F200 will alarm when it contacts a smaller amount of water. If you select low sensitivity, the F200 will need to come in contact with a larger amount of water before it issues an alarm. Then establish notification parameters for a detected leak or cable break and save your changes.

Digital Inputs

Use the inputs tab to name your digital inputs and to configure alarm and notification parameters (email, audible, enable relay output, etc.) for each input.

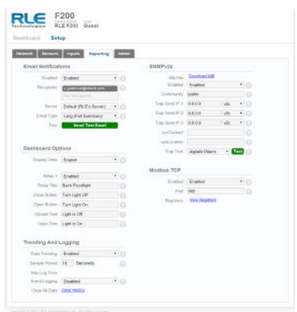
Keep in mind the "When" box will tell the F200 when to send an alarm. For instance, if your digital input is normally open, the F200 should generate an alarm when that contact is closed. So for that input, you'd select "Closed" in the When drop down, and then decide what notification action the F200 should take.

Network Cameras

Want to view your remote facility any time, from anywhere? Use a web camera. Once you have one installed and running in your facility, you can link to it from the F200. Enable the webcam capabilities and use the fields to name the camera and direct the F200 to its streaming image. You can also enter a URL that will take users directly to the webcam. The F200 can provide views to four cameras. Once each camera is enabled, it will appear on the F200's Dashboard.

Reporting

Email Notifications



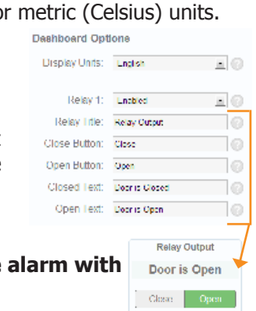
Use this feature to send email alerts when the F200 goes into alarm. Enable email notifications and enter the email addresses in the Recipients box. Recipients will receive all email alerts generated by the F200.

Once you save any changes made within this section, a test email button appears. Send a test email to ensure your notifications are working correctly, and that your spam filter hasn't blocked the incoming email notifications.

Dashboard Options

Use the Reporting tab to designate English (Fahrenheit) or metric (Celsius) units.

Relay Output



When you enable the relay output, a button to control the relay output appears on the Dashboard. The button allows approved users to open and close the relay output from the F200's Dashboard. Use the options to configure the button's labels. **Any alarm condition that is configured to change the state of the relay output will override the manual button control of the relay. If an alarm is active, you cannot turn off the alarm with the manual relay control button.**

Trending and Logging

Once trending is enabled, a graph will appear on the Dashboard. To examine the points on the graph in greater detail, use your mouse to highlight a section of the graph and zoom into it, or use the slider bars beneath the graph to adjust the range of the graph. Double click anywhere on the graph to return to the default view.

The sample period designates the amount of time that passes between logged data points on the trending graph, and can be set from one second to one day. The F200 records up to 86,400 points - a shorter sample period records more closely grouped points for a shorter overall period of time, while a larger sample period charts data points spaced farther apart, but over a greater overall period of time. The trending log is downloadable as a CSV file.

Enabling event logging generates a table on the Dashboard that logs all major alarm and return to normal events with a date and time stamp.

SNMPv2 and Modbus TCP

The F200 can be configured to communicate via SNMPv2 and Modbus TCP. If you wish to use this functionality, configure the settings on this page. Note that links in these headings allow you to download the SNMPv2 MIB file and to view the current readings of all the F200's Modbus TCP registers.

A separate document, available in the Support section of RLE's website, further details the F200's Modbus capabilities.

Admin

Firmware Updates

Two firmware update methods are available. Click the Check for Updates button to automatically download and install the newest version of firmware for the F200, or download the firmware from the RLE website and manually update it using the Upload Firmware File link. The F200 will reboot itself once the firmware is installed. Once the reboot is complete, the F200 will be ready to resume its operations. Do not access or configure the F200 while it's downloading and installing new firmware.

System Controls

The reboot button allows users to remotely reboot the F200. Use the Identify button to make the unit's LED flash and its audible alarm to sound. This helps users connect a web interface with an actual physical unit.

Users

Two types of users can be configured on the F200. Up to eight usernames can be configured in each of the two categories. Each username can be used by only one user at a time. **It is very important for each user to have their own username:**

- Admin User - Admin Users can view and edit the F200's Setup screens.
- Normal User - Normal (Read Only) Users can only view the F200's Dashboard.

There are three login configurations:

- Never - Users are never required to log in. Anyone can view the Dashboard and Setup screens, and anyone can change the F200's configuration through the Setup screens.
- To Change Settings - A login is NOT required to view the Dashboard. Only users logged in as Admin Users can view and edit the Setup screens.
- Always - All users are required to log in. Normal Users can only view the Dashboard. Admin Users can also view and edit Setup screens.

A relay control checkbox is also located on this page. If you check this checkbox, only Admin users will be able to operate the Relay button on the Dashboard.

Logout

If you're logged in to the F200 and have finished your configuration work, click this link. It will log you out of the device and return the view via your workstation back to its read-only state.