ModHopper® - Wireless Modbus/Pulse Transceiver

Cat. No. R9120

Quick Start Guide

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1 PRODUCT APPLICATION LIMITATION

- Leviton products are not intended for use in critical applications such as nuclear facilities, human implantable devices or life support. Leviton is not liable, in whole or in part, for any claims or damages arising from such uses.
- Leviton strongly believes in continuous improvement, therefore we must reserve the right to change specifications and product offerings without notice. Where possible, we will substitute products with equivalent functionality when necessary.

NOTICE
This product is not intended for life safety applications.
Do not install this product in hazardous or classified locations.
The installer is responsible for conformance to all applicable codes.

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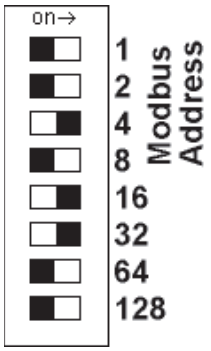
2.1 Modbus Address



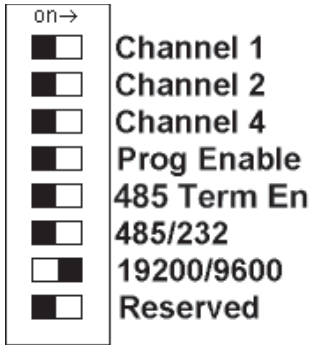
Every Modbus device in the system must have a unique address.
This includes each Modhopper and every attached RS485/Modbus device.

Select an address, and set the dipswitches to match.

The sum of the value of the switches is the address. In the example to the right, address 52 is set by placing switch 4, 16 and 32 to the on position.

Note: 4 + 16 + 32 = 52

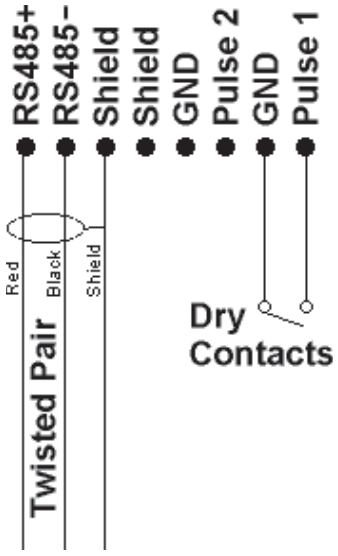
2.2 System Switches



For most systems, set all of the system switches to the “off” position.

The only switch that is required is the RS485 baud rate option. Set this to “off” for 19200 or to the “on” position for 9600. The example to the right is a default configuration for 9600 baud on the RS485 connection.

2.3 Pulse Hookup



Attach any “dry contact” pulse output meters to the pulse input terminals as shown in the wiring diagram. The ModHopper can support 2 pulse devices. The ModHopper can be attached to many types of pulse output meter. Power, water, gas, etc. For “KYZ” type power meters, use the normally open contacts, usually labeled “K and Z”

2.4 RS485 Modbus Hookup

Attach any Modbus slave or master devices to the 485 terminals as shown in the wiring diagram. Up to 32 Modbus devices may be attached to each ModHopper.
Note: when attaching Modbus devices, it is not necessary to specify if the device is a master (EMH, PLC, etc) or a slave device (power meter, sensor, etc). The ModHopper will automatically detect the master and handle it appropriately.

2.5 Attach the Antenna

Attach the Antenna to the side of the ModHopper. The antenna should be finger tight and be placed in a vertical position.

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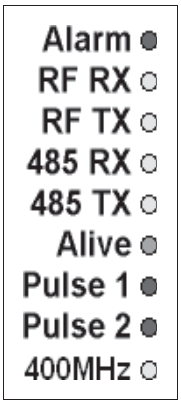
2.6 Power up the ModHopper

Attach the power brick to the power jack on the ModHopper. The device should power up and be ready in a few seconds. The LEDs should blink in the following manner.

- The “Alive” LED should start to blink about once per second.
- The Alarm LED will blink when transmission errors occur.
- The RF TX/RX LEDs will blink when the radio is receiving or transmitting data.
- The RS485 LEDs will blink for local Modbus activity.
- The Pulse input LEDs will light when the corresponding pulse input terminals are closed.



When the ModHopper is operating, the Test Button can be used to report the signal strength received by the ModHopper from another unit. Press and hold down the test button. The status LEDs will light up as a bar graph display. Each LED is approximately 10% of scale. For example if PULSE 1 and 2 are on, the received strength is approximately 20% to 29%. For useful signal reporting, it is important to turn off all but one other ModHopper.

For complete instructions and Modbus register listings, please consult the ModHopper user manual

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4 WARRANTY AND CONTACT INFORMATION

FCC STATEMENT:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equipment

TRADEMARK DISCLAIMER:

Use herein of third party trademarks, service marks, trade names, brand names and/or product names are for informational purposes only, are/may be the trademarks of their respective owners; such use is not meant to imply affiliation, sponsorship, or endorsement. Modbus is a U.S. registered trademark of Schneider Electric USA, Inc. The Leviton logo is a registered trademark of Leviton Manufacturing Co., Inc. Modhopper is a registered trademark of Obvius, LLC.

FCC SUPPLIERS DECLARATION OF CONFORMITY:

Model R9120 manufactured by Obvius Holdings, LLC, 20497 SW Teton Avenue, Tualatin, OR 97062, www.obvius.com.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC STATEMENT:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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Visit Leviton's Web site at www.leviton.com

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FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada ULC** to the attention of the **Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1 800 405-5320.**

LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. **For details visit www.leviton.com or call 1-800-824-3005.** This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. **There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose**, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years. **Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation**. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

For Technical Assistance Call: 1-800-824-3005 (USA Only) or 1-800-405-5320 (Canada Only) www.leviton.com

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