*Quick Start Guide 113/135 ADR Series

If a cellular router is provided for the Internet, skip the Network Planning section of this document.

Network Planning

If you intend to use a corporate Local Area Network as the Internet connection, it is highly recommended that you contact the IT Manager before arriving at the job site. Make certain that the GRIDlink ADR will be able to operate as a DHCP client on the network by sending a letter explaining what is needed. See https://gridlinktechnology.info/letter-to-it-manager/

Static IP vs DHCP

If a static IP Address must be assigned, this is best done at the factory prior to shipment. If this is not possible, then it is recommended for the installer to make the change on a network that permits DHCP (such as the office) prior to arriving at the job site. See https://gridlinktechnology.info/change-dhcp-to-static-ip/ or Contact Customer Support for assistance.
You will need:

- New IP address
- Gateway IP Address
- Subnet Mask
- DNS Servers if not 8.8.8.8

Prior to arriving at the job site..

Sign Up for GRIDview

Obtain an account to make installation easier. Sign Up on https://na.gridview.technology
Notify Support via email (support@gridlinktechnologies.com) that you wish to be added to a GRIDview account.

Schedule Support

If this is your first installation, it is important to contact support to schedule a time for us to be available to answer any questions that may arise during the installation.

Schedule through: support@gridlinktechnologies.com

Include a return phone number.

Test GRIDlink

It is always recommended to power up the GRIDlink and connect to the Internet on a known network like your home or office before installation. Confirm it is online with GRIDview or DO4 is illuminated. This way if GRIDlink fails to go online it is definitely the network at the job site. A few minutes spent here will save hours at the job site.

Easy 3 Step Installation

After you have mounted your GRIDlink ADR on a DIN rail or surface mount using the 2 mounting screw holes provided it is then a simple **3 step process**.

Installation
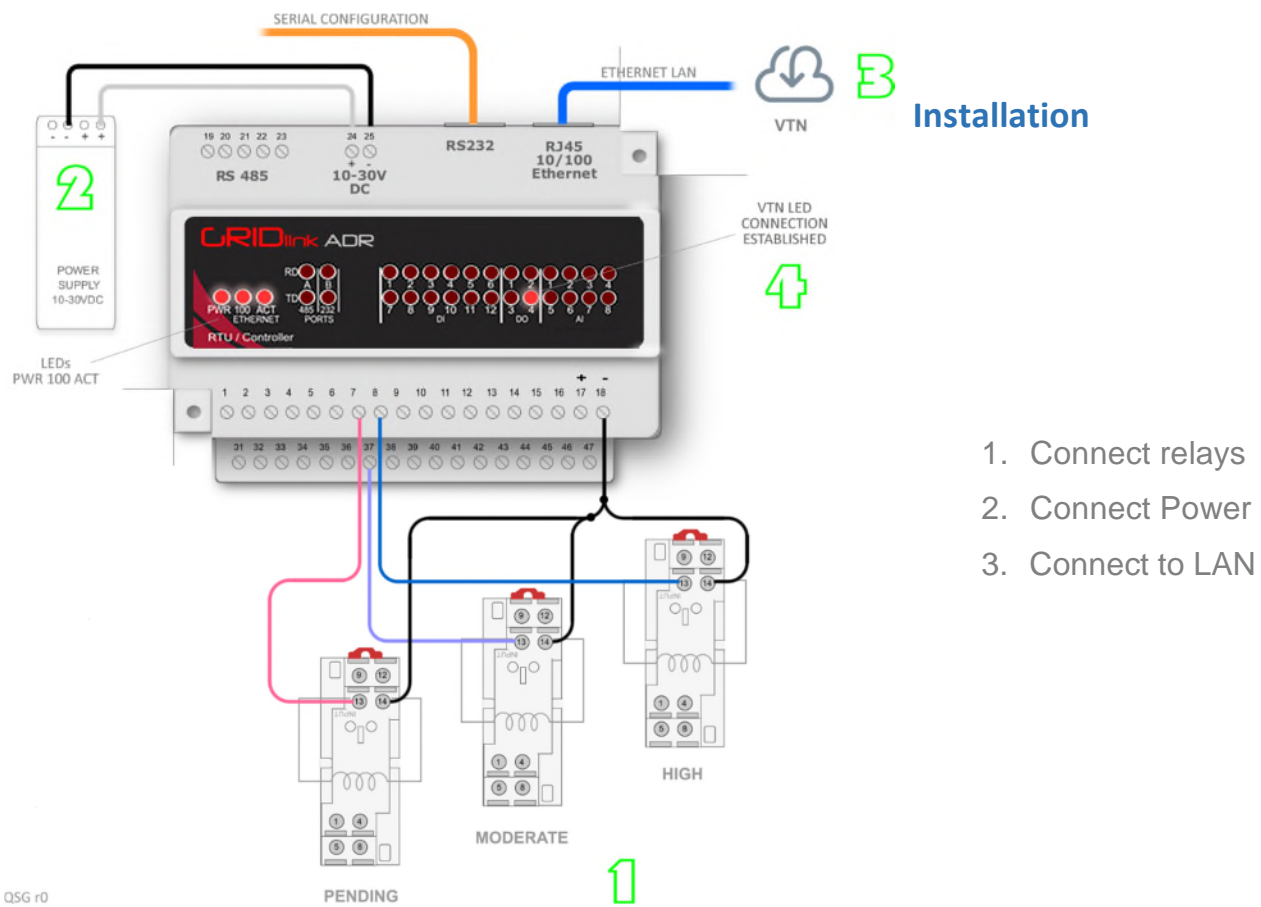
1. Connect relays
2. Connect Power
3. Connect to LAN

1. Connect your load shed relays.

Most Utilities use the HIGH relay for load shedding. Terminals: (-) 18 (+) 8

MODERATE was created for a second tier load shed but is rarely used so it is optional. In some special cases it is used for taking extra load prior to the Event for example "Pre-Cooling".

Terminals: (-) 18 (+) 37

PENDING (also optional) can be used to notify personnel that an Event is coming. The relay can be wired to a beacon for example. Terminals: (-) 18   (+) 7

You have 2 methods available to test the relay connections:

1. Manual Relay Test
2. GRIDview Cloud Test

2. Connect 10-30VDC regulated power to terminals 24 & 25.

You should see the PWR LED illuminate. If you have a GRIDlink assembled in an enclosure then this should already been wired and all that is needed is to wire the AC to the power supply.

3. Insert the CAT5E cable from the LAN to the RJ45 port on the top of the controller.

Caution, there are 2 RJ45 ports on top of the controller. The one the right is Ethernet. The one the left is RS232.

You should immediately see the Ethernet 100 and ACT LEDs illuminate. This is an indication that the cable is good, it is seated properly in the port and it is connected to a network.

GRIDlink supports DHCP so it will obtain an IP address automatically from the network. After about 2 minutes, the PWR LED should be ON solid. If it is blinking then the GRIDlink was not able to obtain an IP address.

If the GRIDlink has been left on for several hours without a CAT5E cable connection it probably has not been able to acquire an IP address, it may need to be power cycled.

If the GRIDlink still does not acquire an IP address then check the trouble shooting Guide or contact the IT Manager. You will need the MAC Address which is printed on the GRIDlink module.

4. DO4 will illuminate when connected to the VTN

Within 2 or 3 minutes of acquiring an IP address from the DHCP server on the local network.

If the local network allows it, the GRIDlink will connect to the Utility's VTN or a test site and when successful the DO4 will illuminate.
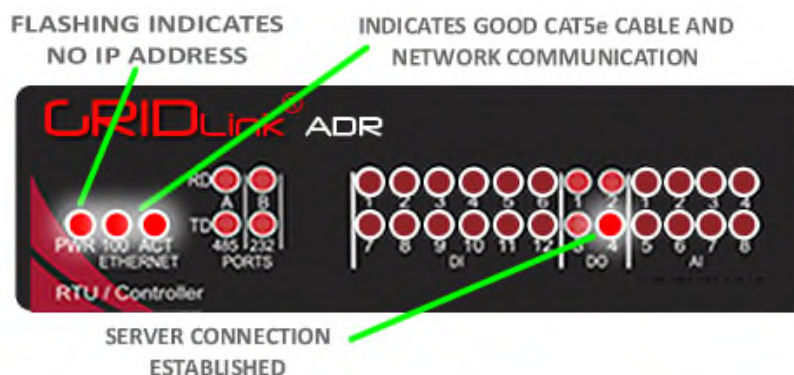
If a Text Message Subscription was set up in advance, a SMS text will be received stating that the GRIDlink is ON LINE with GRIDview.

You are finished!

Connection to the Utility Server

GRIDlink is shipped with an account to an Open ADR Test Server, so the final connection does not need to be configured prior to installation. It serves to confirm a connection only. No test Events will be sent from this account unless requested.

When the actual account information is received from the Utility it can be loaded over GRIDview at any time in the future. Contact support for any questions.

Initial Testing

Manual Relay Test

Series 782 relays included with GRIDlink supplied enclosures have a Manual Test Button. This is typically used when the electrician connects to a load and wants to check circuit continuity.

When pressed an orange flag indicates contact closure on NO contacts and contact open on NC contacts.

GRIDview Initiated Test

From the GRIDlink Home page on GRIDview the relays can be tested.

Toggling the *Transfer All* to Off isolates the relays from the DR Signal and therefore will not change state automatically. This is useful if you wish to test to valid a DR Signal without actually shedding loads.

Test VTN Initiated Test

All GRIDlinks are shipped with a Test Server configured.
Call Tech support to arrange a test signal.
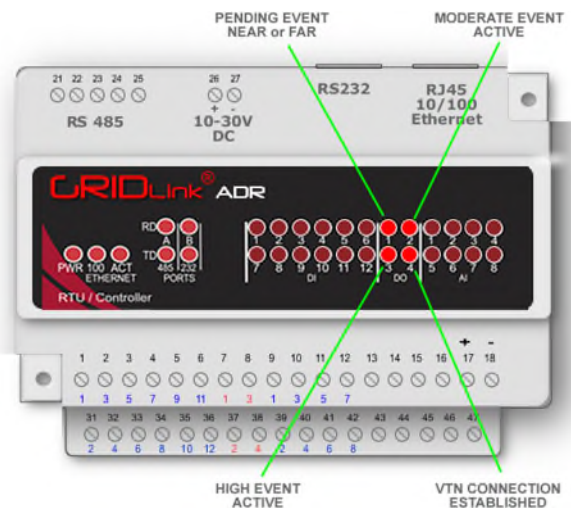
Trouble Shooting

The GRIDview Cloud connection provides a robust backend connection which communicates in a differently than the Open ADR protocol. As a second line of communication, GRIDview connects in most cases when the Utility's server might fails. How each server connects indicates where the problem lies.

GRIDlink OFF LINE (with the Utility's Server VTN) and ON LINE with GRIDview

1. The Utility's VTN server connection is the problem. This could be caused from:

2. The authentication to the VTN is incorrectly configured.

3. The VTN has changed its SSL certification. Tech support can upload a new cert.

4. It is possible there is maintenance being done on the server.

5. In some cases a reboot might be required from GRIDview or power cycle locally.

6. Content filtering in the firewall where the VTN's IP may need to be white-listed.

7. The network DNS server does not recognize the VTN's URL so cannot resolve the IP address

GRIDlink OFF LINE (with the Utility's Server VTN) and OFF LINE with GRIDview

1. This is the network, router settings or your Internet connection.

2. Check the GRIDlink and see that the PWR 100 ACT LED are all illuminated. If 100 ACT is OFF then check your cable and physical connection.

3. If the GRIDlink is set up for DHCP and was powered ON for several hours without a network connection to a DHCP server, it might need to be power cycled. This would be indicated by the Power LED blinking which should be solid.

4. If the GRIDlink was given a Static IP, check for incorrect settings through the Tool Kit or the IP to MAC Address binding in the network Router does not agree. This would be indicated by the Power LED blinking as well. Re-check all settings.

5. If using IP to MAC Address resolution or binding, check for changes in the router.

6. If the local area network connection is OK, you should test to make sure there is an Internet connection. This can be done by plugging a laptop into the same cable used by the GRIDlink. Open a Command (CMD) screen and enter: ping 8.8.8.8 or other known Internet IP. It is possible that 8.8.8.8 is available but the network has its own DNS server. Tech support will provide the IP Addresses of the VTN and GRIDview to ping.