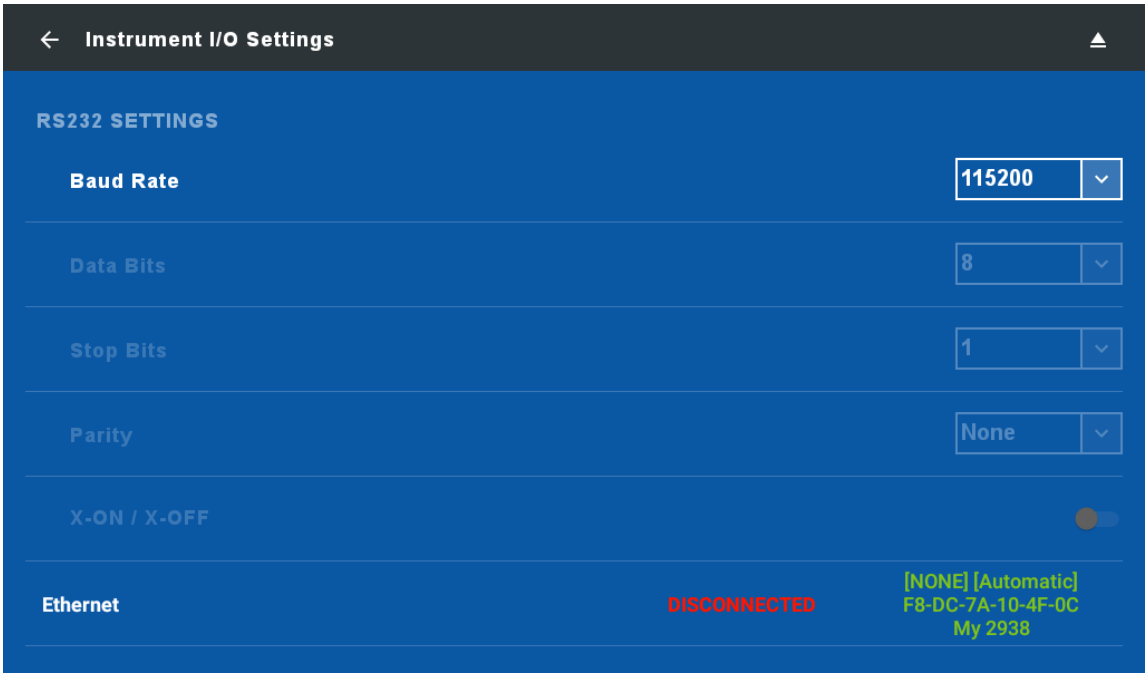
Instructions for connecting the x938 meter via Ethernet with a PC or other Ethernet Devices

The Newport x938 meter is primarily intended for standalone usage. However, it offers the capability to be controlled remotely via USB or Ethernet using Newport's PMManager Windows PC application.
Ethernet connectivity is available from x938 meter firmware version 4.06.

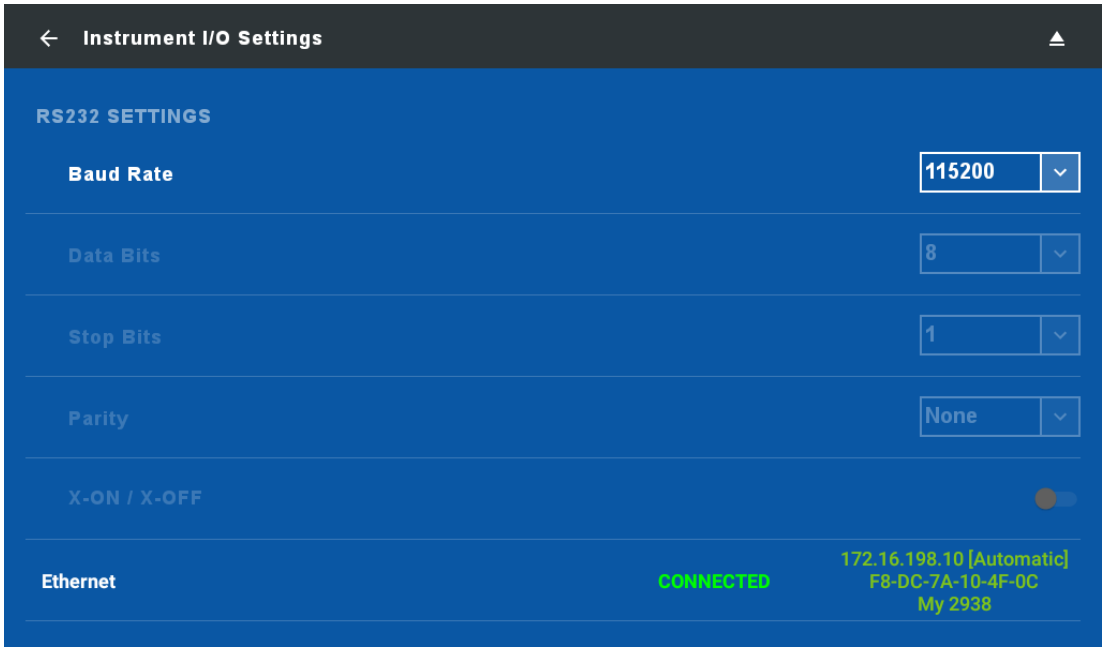
Alternately, customers who wish to integrate measurements from the x938 into their own software can communicate and control the x938 via Ethernet or RS232 by utilizing the set of Newport 'User Commands' in their proprietary software code.
For User Command details please see the "Newport User Commands.pdf" document, downloadable from:
https://www.newport.com/mam/celum/celum_assets/np/resources/Newport_User_Commands_rev7.pdf?0
or installed together with PMManager software

x938 Ethernet Settings:

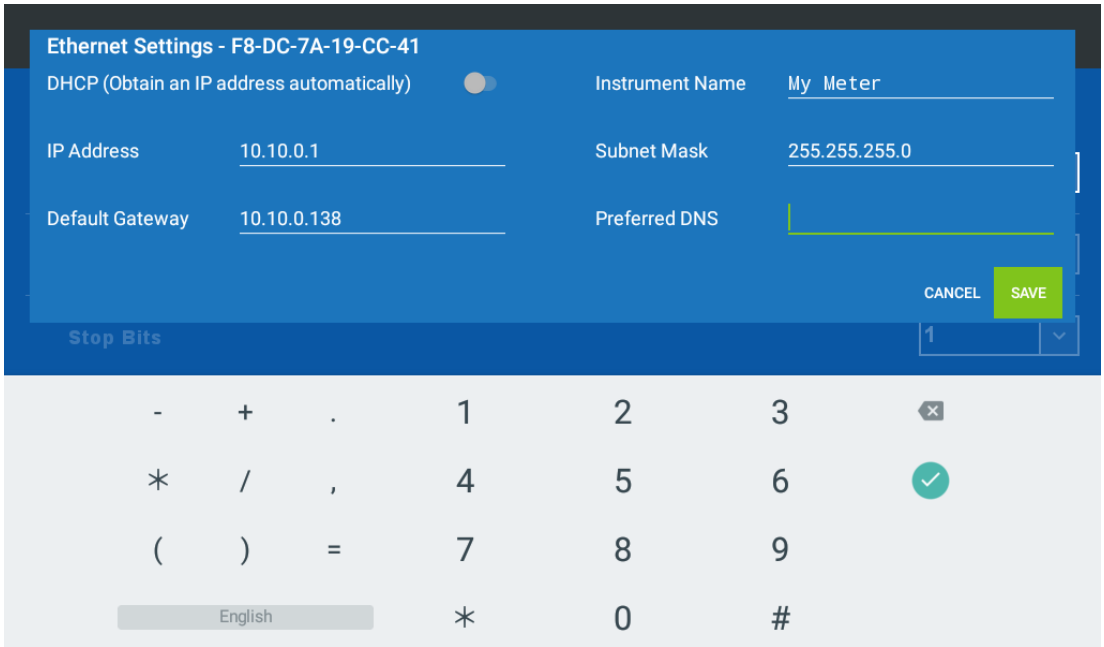
Go into the ***Ethernet*** Setting in the ***Instrument I/O Settings*** page.
When the meter is not connected via Ethernet, ***Disconnected*** will appear in red.



When the meter is connected via Ethernet, ***Connected*** will appear in green.
The IP address and device MAC address will appear.



Press the green text at the end of row showing the Ethernet status in order to open the ***Ethernet Settings*** window.



The IP Address and additional fields can be entered either manually or received from a connected network automatically via DHCP.
Text entered in the ***Instrument Name*** field can assist in identifying the meter.

TCP Connection and ports:

The x938 can communicate via Ethernet using TCP/IP and HTTP protocols

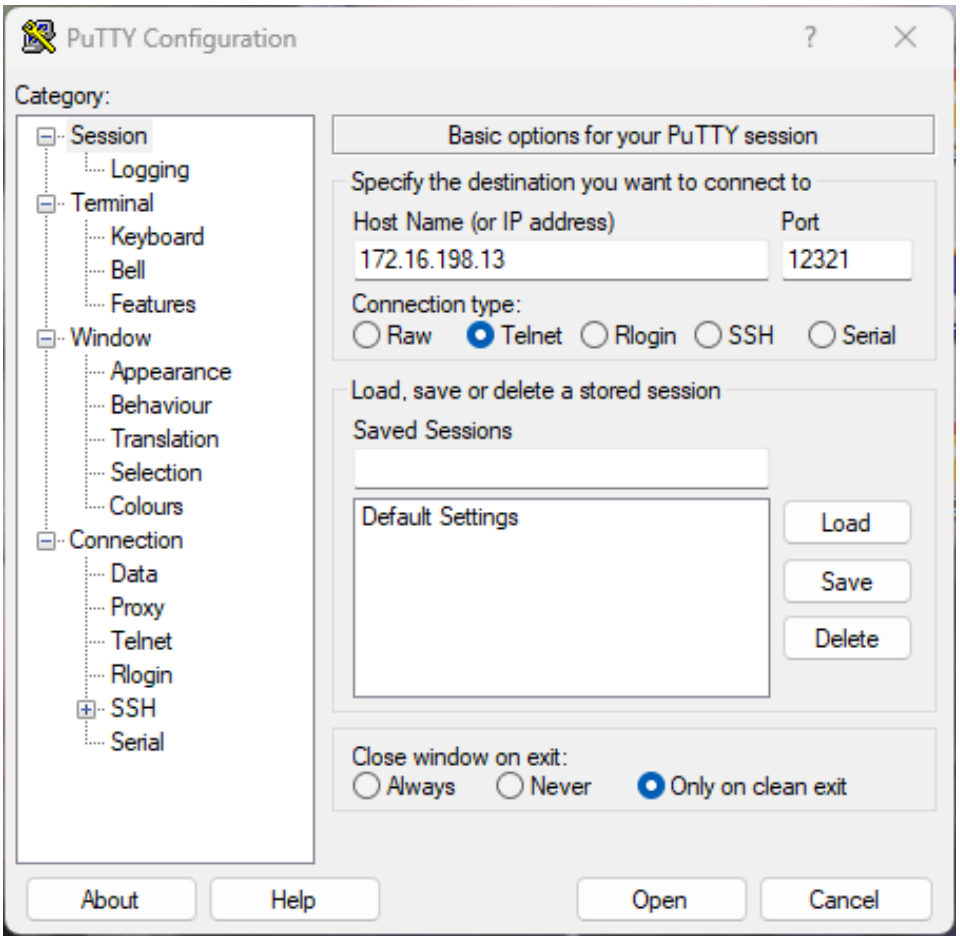
TCP/IP Protocol:

The x938 can communicate via Ethernet using TCP/IP protocol via port: 12321

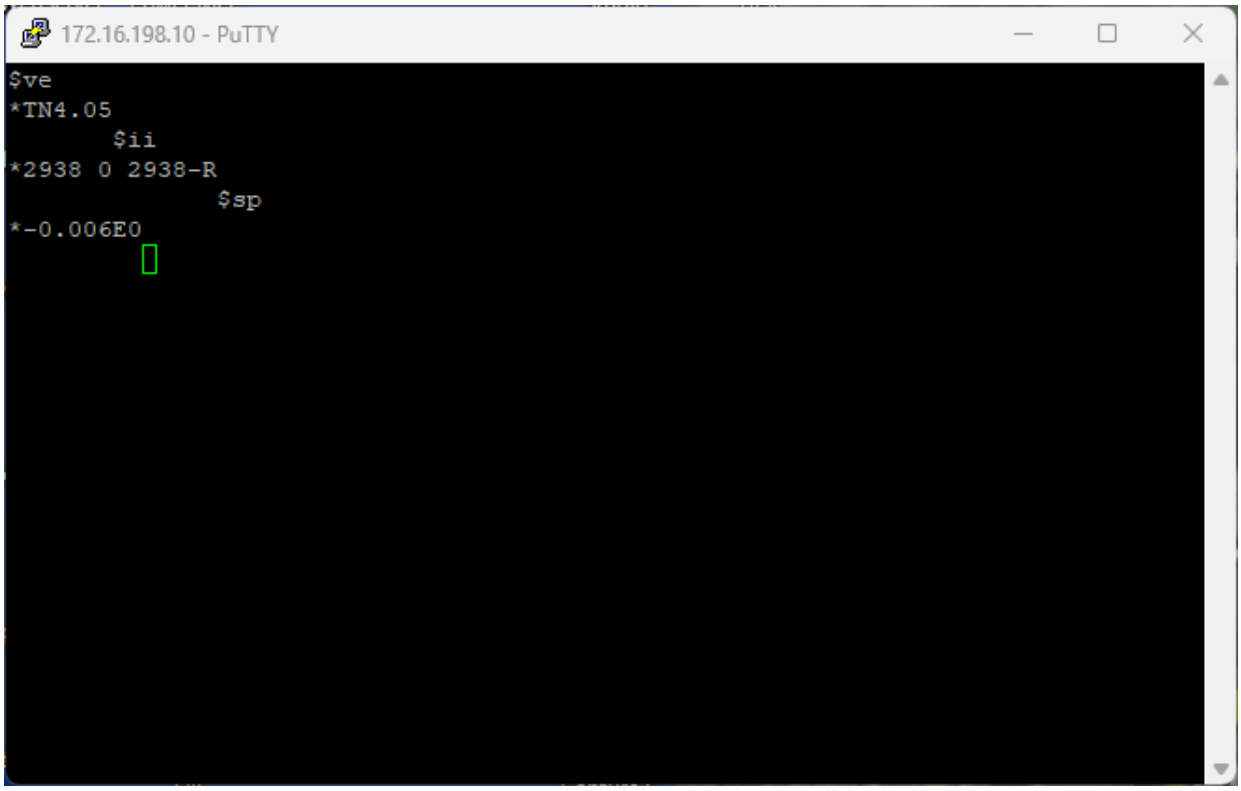
TCP/IP is a Client-Server protocol with reliable packet confirmation packets.
The x938 meter is the server and the other Ethernet device is the client.
Communication with the meter can be realized from proprietary software package on any Ethernet connected platform and a set of Newport User Commands which are provided to allow control and query the meter.
Any off-the-shelf Telnet style application can be used to communicate with the x938 meter.

Using off the shelf application like "PuTTY"

Opening a "Command port" (12321)

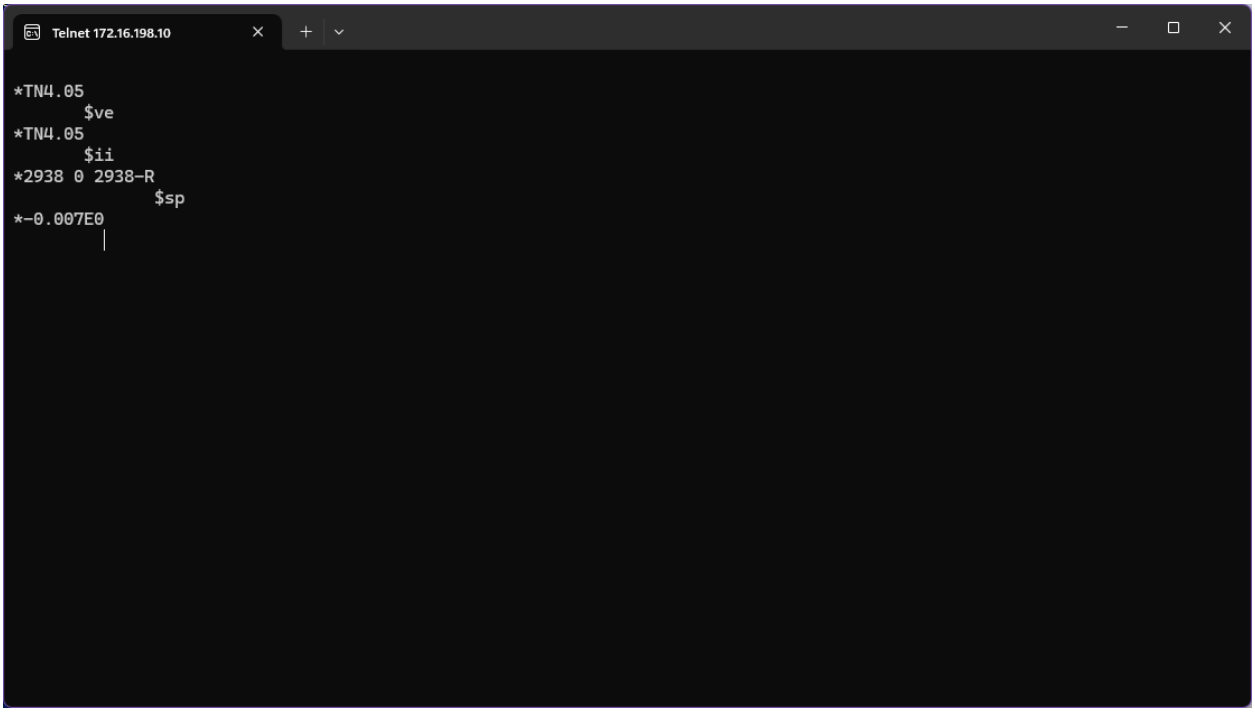


Examples of commands & replies sent via Telnet terminal



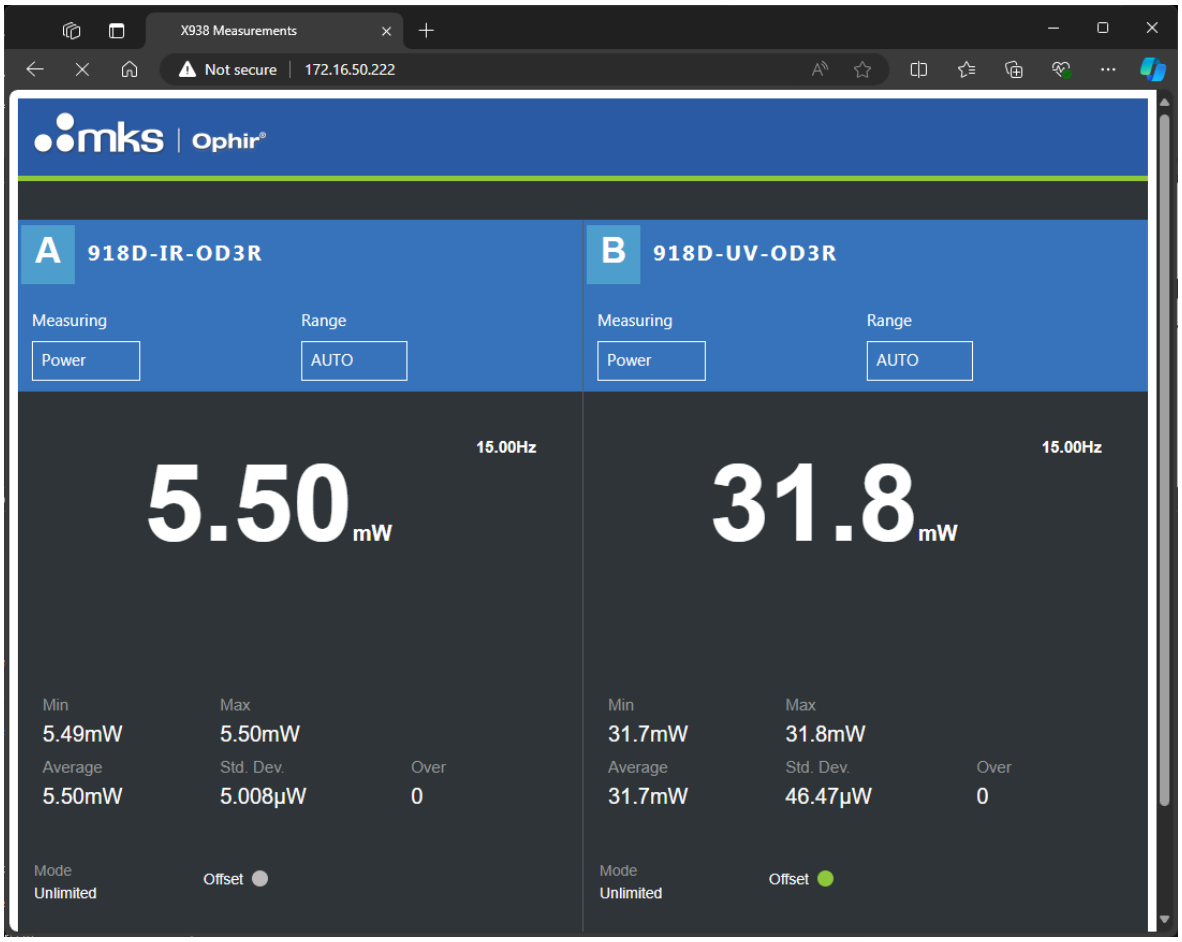
Using a standard browser in Windows (will launch a Telnet console)

telnet://172.16.198.13:12321



HTTP Protocol:

HTTP is a Client-Server protocol with reliable packet confirmation packets.
The x938 is defined as the Webserver and the other Ethernet device is the client.
Communication will be established over port 80.
Example:
http://172.16.50.222



At this point and time, the functionality over HTTP protocol is limited.

- Passive measurement screens are exposed as web pages reflecting the instrument screen.
- Access to log files is exposed via HTTP.