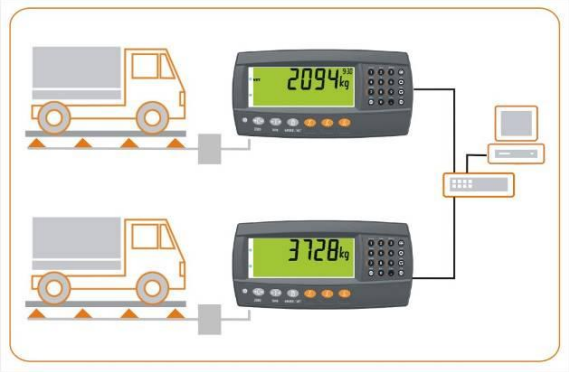
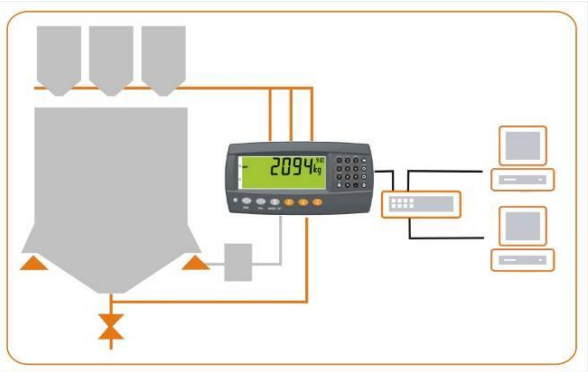
Application Note: R400 Indicators with M4221 Ethernet Connection

Application:





Connect R400 indicator onto a network using an Ethernet connection using the M4221 module for:

- Remote monitoring of indicator (for service technicians)
- Direct connection to the indicator from your PC application using standard sockets interface, to retrieve weight readings and configure settings
- Remote PC serial port – locate your PC away from the indicator and still access the indicator like it was connected directly to the PC on a serial port (M400-525)

The Ethernet module features:

- One bi-directional server socket to interact with network port on the R400 (TCP Port 2222)
- 10 uni-directional sockets to interact with auto-output port on the R400 (TCP Port 2223)
- DHCP client built in for auto IP negotiation or static IP allocation.

Components:

K401, K402, K410 or K411
R400 Series Indicator

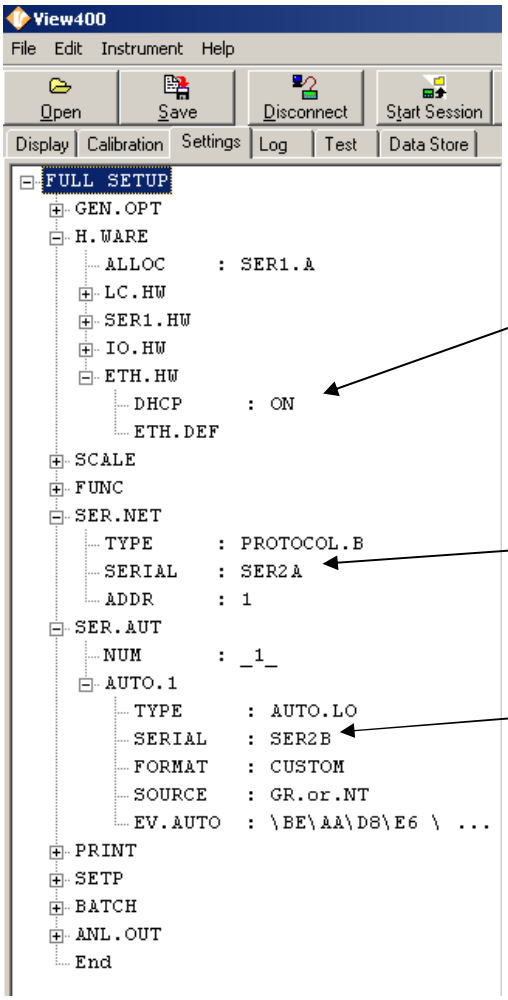
M4211
Ethernet Module

*Note1 Either R420s ABS or R423s flush stainless steel housing could be used.

Setup of Ethernet Module on Indicator

1) Configure indicator for M4221 module

(To enter the setup mode, hold down the **Power** and **F3** key for a few seconds.)



If network that indicator is to be connected on has a DHCP server then DHCP will be ON – this is the default, otherwise static IP addressing with appropriate masks etc can be configured.

Serial Net is allocated to SER2A that will be used for the both way port **TCP Port 2222**. This connection can be used for remote monitoring of the indicator using View400 for example.

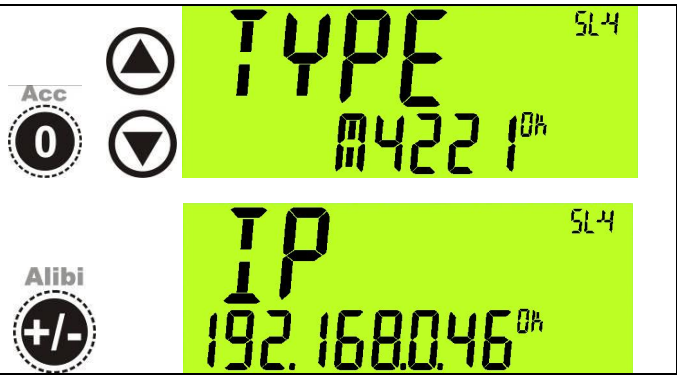
The auto output is allocated to SER2B which will use the uni directional port **TCP Port 2223**. In this example a custom format has been setup as will often be the case a custom output will be defined to work into an existing system.

2) Determine IP Address of Module

Once established on the network the IP Address can be determined using a long press of the '0' button to view the Accessories that are installed.

In this case the Ethernet Module M4221 is installed in Slot 4.

The +/- Key scrolls through the information on the module.

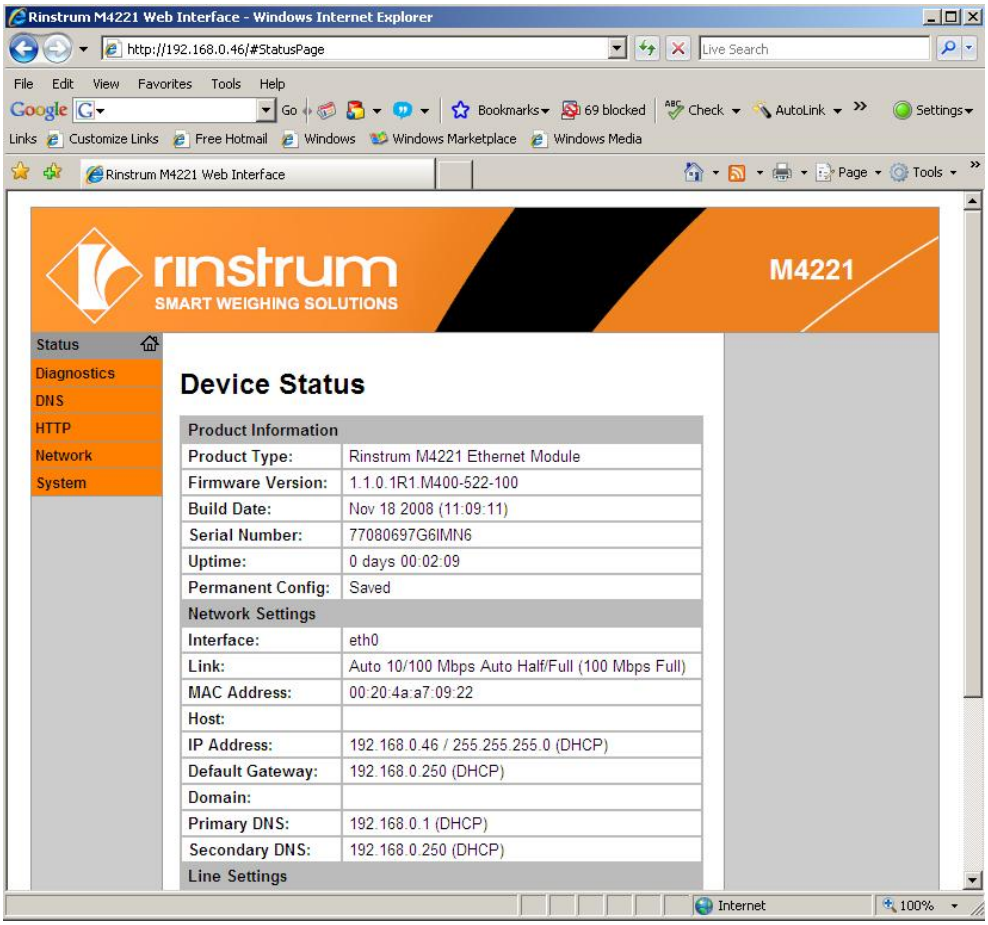


Using the Module Web Interface

The Web page provided by the module can be accessed entering the following into your web browser:

http://<module_ip_address>/ (as established above the IP Address is 192.168.0.46 here)

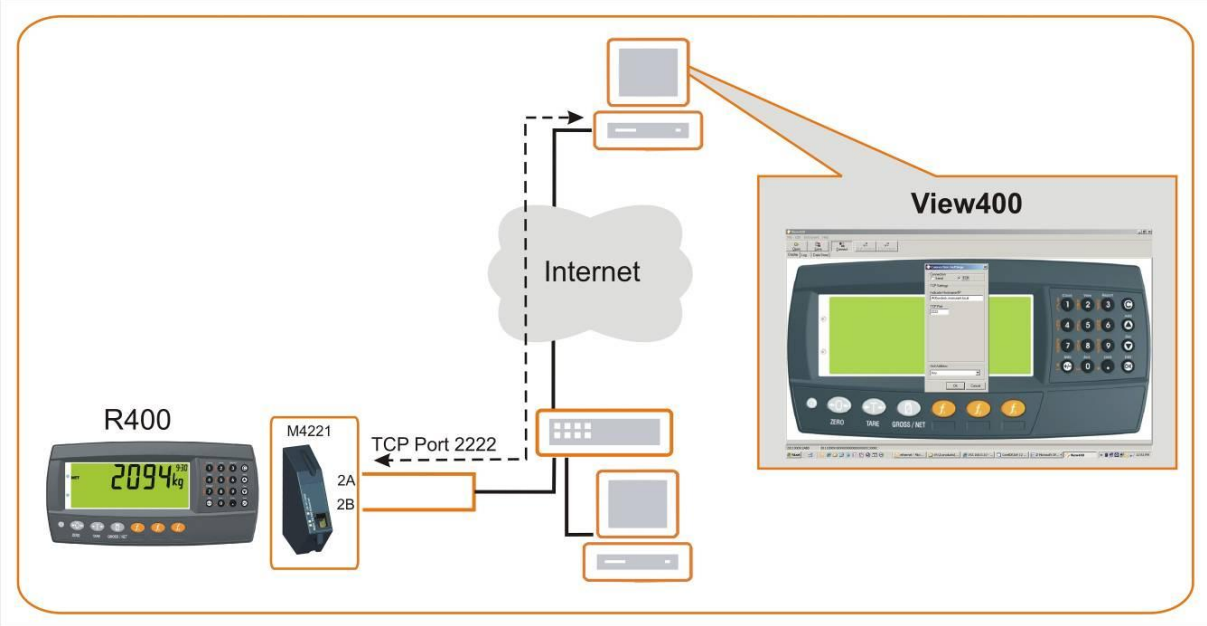
The default username for the module web page is “admin”, and the default password is “PASS”.

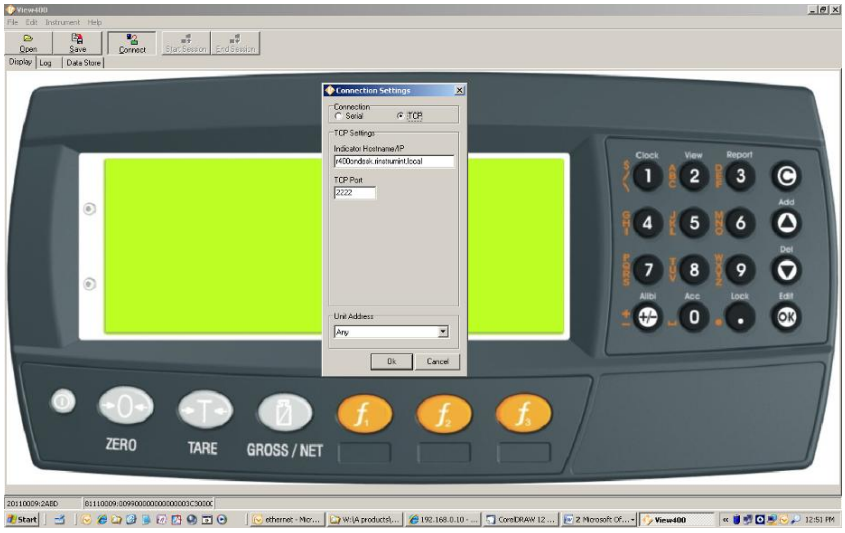


The web interface is useful for:

- Diagnostics – what is connected to which sockets.
- You can set a hostname if you have the device on a named network.
- Upgrade module software and reset device

Remote Monitoring of Indicator using View400





Using View400 software you can connect to an indicator via a network, either locally or remotely over the internet, using the IP address or Host Name of the unit. To connect via View400:

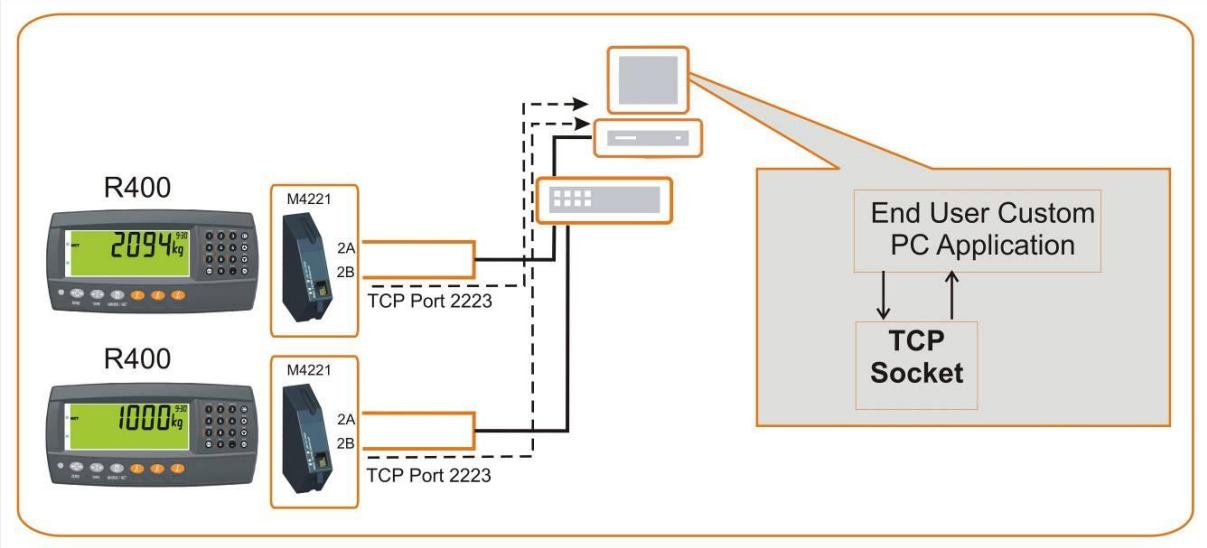
- Select a TCP connection from the connection settings dialog
- Enter the indicator IP address or hostname
- The TCP port set to 2222.

This access then allows the usual Viewer functionality, for example:

- test the connection to the indicator
- modify the indicator setup
- monitor the unit.

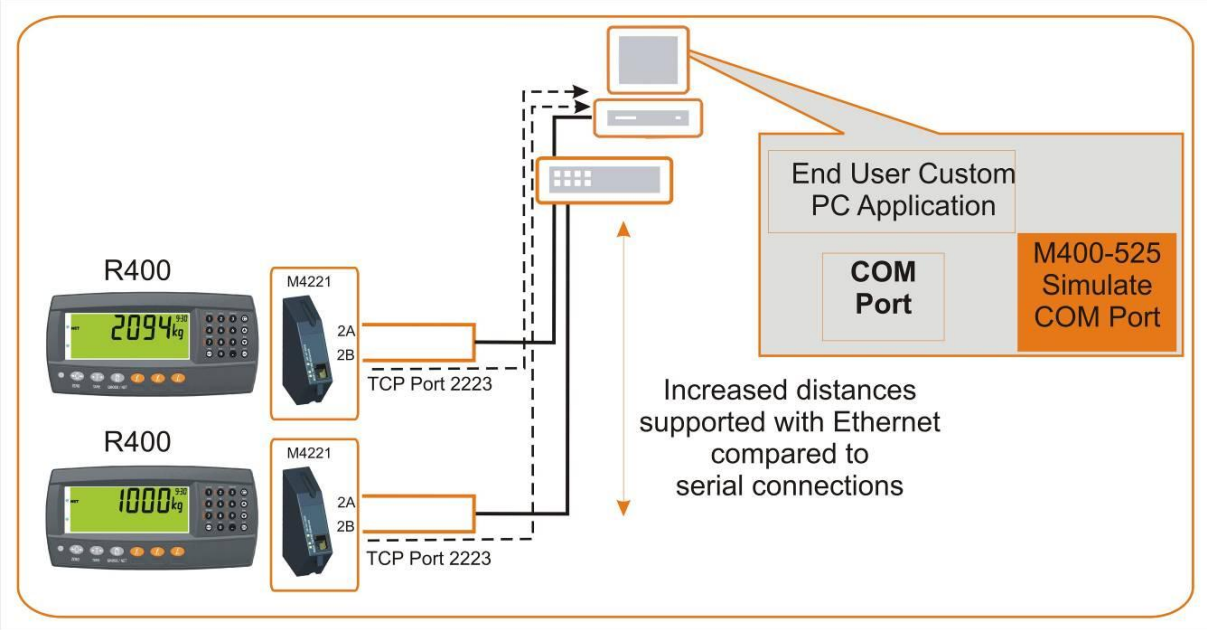
Supported in View400 version 1.44+.

Indicator and PC Connections using socket interface



Direct connection to the indicator from your PC application using standard sockets interface, to retrieve weight readings and configure settings. Both TCP Ports 2222 and 2223 are available. TCP Port 2223 assigned to would generally be configured as a custom print string on the auto output compatible with what is required by the End User Custom Application.

Indicator and PC Connections using socket interface



Remote PC serial port – locate your PC away from the indicator and still access the indicator like it was connected directly to the PC on a serial port (M400-525). Ethernet allows greater distances than serial and is useful on larger sites or where the central PC is remote. This scenario is useful when a legacy system that uses a serial port can't be changed to use TCP connection. The driver M400-525 software bridges the two by simulating a COM port.

For more information refer to the Reference Manual for this product