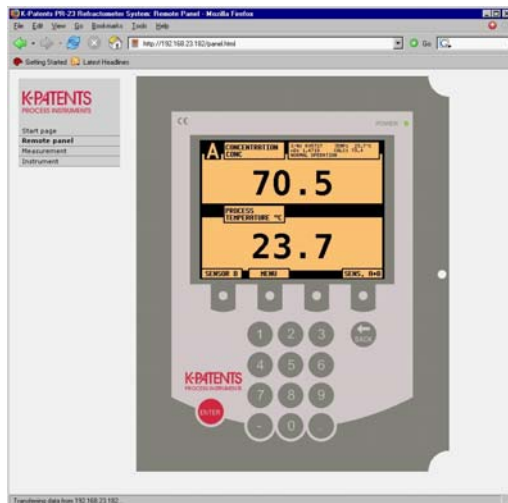


REMOTE USABILITY AND DATA-LOGGING VIA ETHERNET

Availability/Compatibility of features:

Feature:	Availability/compatibility:
Instrument homepage and remote usability	PR-23 DTR Program versions 2.0 and up
Data logging	All PR-23 Process Refractometers

PR-23 remote panel in web browser:



INTRODUCTION

Internet technologies, such as UDP/IP (User Datagram Protocol) on Ethernet, are growing in popularity as methods of communicating with field instrumentation. With the proliferation of this world's most common communication technology also on the factory floor, the modern instrument manufacturers now begin to provide communication services that extend simple data acquisition.

Internet provides easy access to field instruments from a web browser software. This access provides a simple management mechanism that can significantly improve instrument usability. For instance, it is possible to remotely alter calibration and configuration settings, review instrument diagnostics and update program versions without having to go to the field. This reduces maintenance costs due to time savings and increases the ease of use.

INSTRUMENT HOMEPAGE AND REMOTE USABILITY FUNCTION

K-Patents PR-23 has a built-in web server as a standard feature. The instrument homepage gives a remote control panel and all measurement and diagnostic information and functionality in an easy-to-use format.

The remote panel is an accurate copy of the physical control panel on the instrument and all operations can be carried out with the remote panel. The homepage (including the remote panel) can be viewed with any computer with a web browser, and there is no need to install additional software. All you need to do is to:

1. Establish a working Ethernet connection to the DTR.
2. Start your web browser.
3. The address (URL) of the instrument homepage is the DTR's IP address, for a factory set DTR it is <http://192.168.23.254/>.

Give the address to the browser just like you'd enter any other address (for example:
<http://www.kpatents.com/>)

4. Wait until the homepage is loaded, this may take a few seconds. If the page looks strange in the first try, refresh/reload the page and it should settle to look approximately like in Figure 12.13; the exact look of the page depends on your browser and screen settings so slight variation can be expected.
5. Use the links in the link bar on the left side of the page to find more extensive information on the instrument.

DATA LOGGING

The Ethernet connection enables data download from a DTR to a computer. All measurement data is available through the Ethernet. This includes the primary measurement results, process n_D , temperature and concentration. Also a lot of diagnostic measurements are available, such as sensor internal temperature and humidity, DT-R temperature, etc. All diagnostic messages are available, as well.

The connection works both directly between DTR and computer, or via a hub or switch, local area network (LAN), wireless network (WLAN) or fiber Ethernet.

Any type of computer (PC, Mac, PDA, mainframe...) with a compatible network connection can be configured to download data from the DTR. For this data acquisition, you'll need to have suitable software on your computer. One solution is to get the software package from K-Patents. The package contains a ready-to-use data acquisition program for Windows 2000/XP.

However, if you need a tailored system, you can also program a downloading facility yourself following the specifications provided at K-Patents PR-23 Manual.

CABLE REQUIREMENTS AND CONNECTION

Ethernet cable specification:

The DTR uses a standard Ethernet cable (10/100BASE-T Cat 5e cable with RJ45 connectors). The maximum cable length is 100 m. Ethernet connection is similar to that of a computer/PC: Use cross-over Ethernet cable to connect the DTR directly to a computer.

If you are connecting the DTR to a LAN (Local Area Network) via a wall socket, use straight-through Ethernet cable.

If you are connecting the DTR to a hub or switch or WLAN access point, please consult the user's guide of your hub/switch/access point for the correct cable type. If you need a longer cable or the environment is electrically noisy, use fiber optics Ethernet with media converters.

For more information, please see Chapter 12 at K-Patents PR-23 Manual.