

## Monitor - ISSN 1472-0221

The Newsletter for Data Acquisition and Control  
Issue 285 October 2022

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You can download Monitor as a pdf file from  
<https://www.windmill.co.uk/monitor/monitor285.pdf>.



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### Extracting data from serial messages

Web link: <https://www.windmill.co.uk/parse.html>

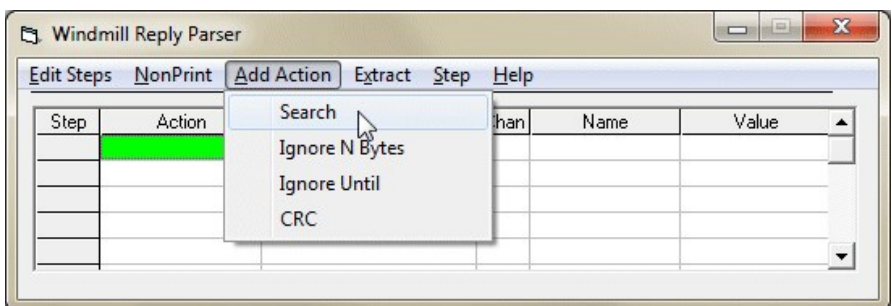
When you collect data from instruments that communicate over RS232, RS485 or Modbus, you need to extract the essential readings from the superfluous padding: parsing the message to obtain just the data items in which you are interested.

Windmill offers free data collection software for serial instruments. You can download this for free for one instrument from <https://www.windmill.co.uk/serial.html>. Or, as a Monitor subscriber, you are entitled to the whole Windmill software suite for free, just email [monitor@windmillsoft.com](mailto:monitor@windmillsoft.com).

### How to locate your data

Using Windmill you have three methods of locating your data item:

1. Search for specific characters in the message string.
2. Ignore characters until one of the ones you want appears.
3. Ignore a number of characters in the message string.



At first glance methods one and two seem to do the same job, but there are differences.

1. When you search for characters the next action occurs AFTER the search term. When you ignore characters the next action occurs ON the specified character. So if you searched for a + sign you would not be able to extract it, but if you ignored all characters until the + sign you would.
2. A search will look for the entire string specified (eg "abc"), whilst ignoring characters will stop at any of the characters specified (eg "a" or "b" or "c")

### More Information

For full details of collecting data, see <https://www.windmill.co.uk/parse.html>. Here we give examples of the types of data string you might receive from different instruments, and tips on data acquisition.

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## Your Data Acquisition Questions Answered: USB Connection Dropping?

### Question

"I run a pilot plant with data logging. Every so often, I get a USB port error."

### Answer

Usually this error is because Windows has got out of sync with the USB, and the problem is that the USB handlers have no means of recovery from error, short of unplugging the usb lead from the computer and plugging it back in. Windows 10 susceptible to this. A cure is to swap you USB device for one communicating over Ethernet, which is more robust. One example of this is the [Microlink 851](#). Your Windmill setup files, programs and connection box would remain the same.



*Microlink 851 data acquisition and control unit*

For more information see <https://www.windmillsoft.com/>

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