SHM COMMUNICATIONS LTD

Engineering Energy Information

Valley House, Winnall Valley Rd, Winchester SO23 0LD
Tel: +44 (0) 1962 865142

www.shmcomms.co.uk

Issue 01 27/7/07

Application note: Modbus testing – with Modscan32

<u>Important Note</u>   For connections, and troubleshooting, please see separate
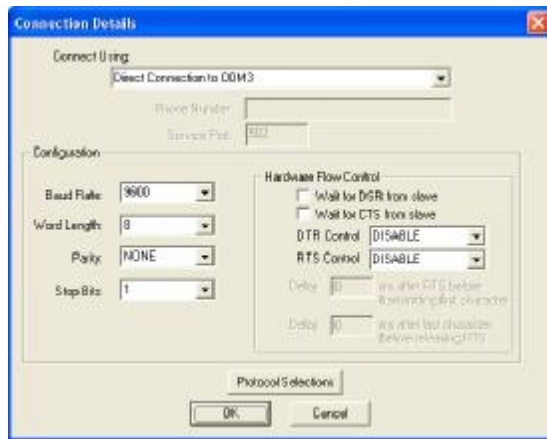SHM application note – AN_ND_RS485_terminals

This note is specifically for use with Modscan32, available from
www.win-tech.com/html/**modscan32**.htm
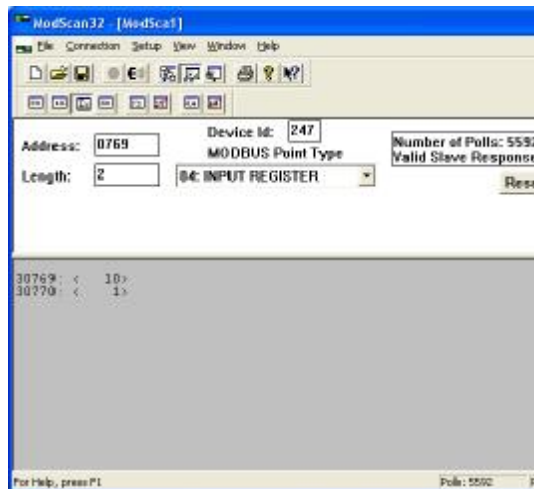
Modscan32 settings:

On first use:
Menu Connection-> Connect
Choose your COM port, baud rate as per the meter, other options as shown in screen shot.

Protocol Selections as shown are suitable for all ND meters.

F Modbus Point type either 03, or 04
F In the lower set of tools, use 3rd, decimal
F Device ID is either the value set to the meter, or IFF only one meter, can use 253.
F Address, e.g. 769, length 2 shows CT ratio and scaling.
F Lower pane shows data received, or ** message if errors.
F NOTE: This appears to be a quirk of Modscan32 – if you change the length, and empty the box before entering new value, then you will receive ** Length error **, and Modscan32tops polling. To restart polling, disconnect, and then connect. Other workaround is to avoid having zero length in the length field, so if changing from 1 to 2, change from 1 to 12 then delete the leading 1

Troubleshooting

The ND meters use addresses one less than the Modbus address.
To check your values, the best thing is to co to the CT ratio address (769, length 2) then you can ensure you are getting the correct value in the meter. Once you are happy with that, go the necessary addresses, and understanding the offset of the address.

Modbus Data Addresses

Note that the "Address" value specified for each parameter in the ND documentation corresponds to the value that appears in the Modbus data frame.

However, the normal Modbus convention for specifying data addresses in documentation starts at 1, not zero. This means that when setting up parameters in a SCADA application, you will *probably* need to specify data addresses 1 greater than that in the ND documentation.

For example, to collect Table 11 (instantaneous values) from a Multicube 3, the ND documentation specifies:-

Address 2816 (kW 3-Ph) to Address 2840 (Power Scale)

To program your SCADA application you will *probably* have to specify:-

Address 2817 (kW 3-Ph) to Address 2841 (Power Scale)