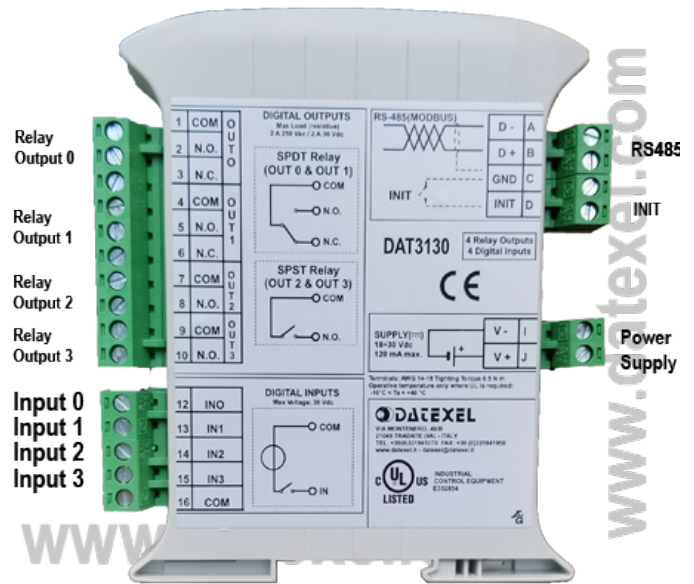


DATEXEL LLC

Modbus RTU Slave with Digital Input and Relay Output DAT3130.

Set Up the DAT3130.

1. Connect 24 Vdc to Positive J and Negative to I.
2. Connect RS485 to A (D-) and B (D+).
3. To check the Digital Input connect 24Vdc across IN0 and COM for channel 0.
4. Connect a Multimeter to measure the resistance across the Common and Normal Open Contact on Relay 0. Terminal 1 and 2.
5. If the communication parameters are unknown, short out the INIT connections C and D.
6. Power up the DAT3130 Modbus RTU Slave.



It is advisable to use the DAT3580 to connect the DAT3130 to the PC. The advantage of using the DAT3580 is that it will isolate your PC from the DAT3130. The DAT3580 options are USB, Ethernet and RS232. If the DAT3580USB version is used, install the USB drivers. If the DAT3580MBTCP or the DAT3580GW are used, make sure the Ethernet parameters are compatible with the net, and transmission of data over port 502 is allowed.

Set-up the PC.

1. Download the 3000-10000 Software from www.datexel.com download page.
2. Close all other software.
3. UnZIP the Modbus_3000_10000_setup software.
4. Run the 3000-10000 software.
5. To start the software click the English version.

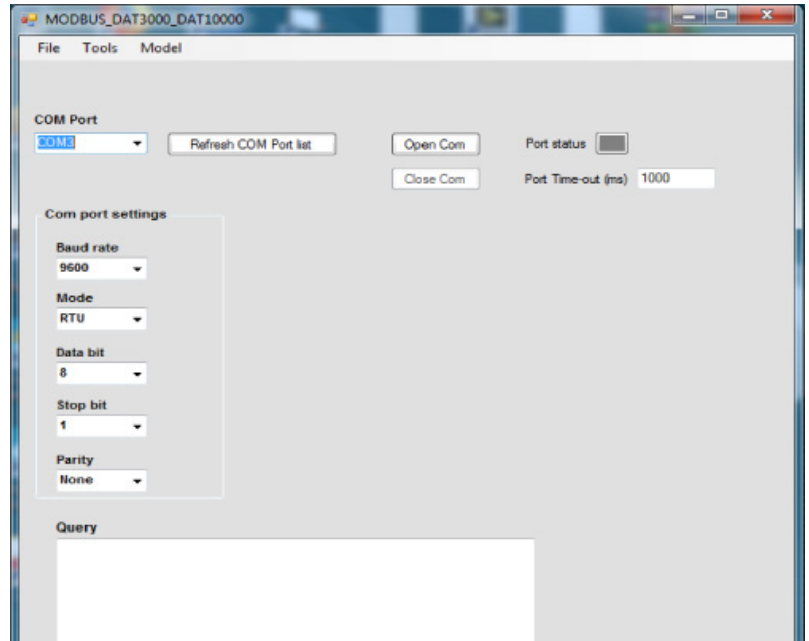
www.datexel.com

Call 561 779 5660 for Technical Support.



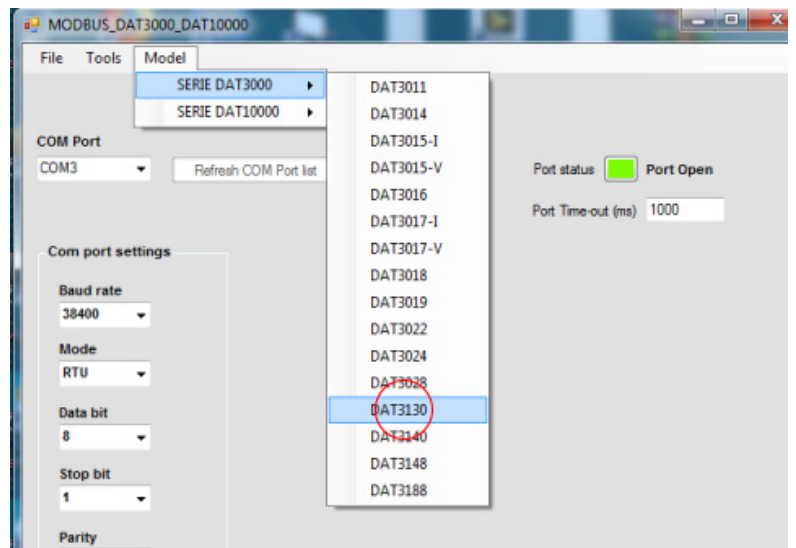
Set Up Communication.

1. The software should automatically select the correct comms port. It is possible to override the comms port or refresh if you change the physical port.
2. Choose the correct Com port settings.
3. Click Open Com. The Port Status will change to green.
4. The default Baud rate is either written on the Label or 38400bps. If it is unknown use the INIT and short it out and set the Baud rate to be 9600bps, RTU, Data Bit 8, Stop Bit1, Parity None.



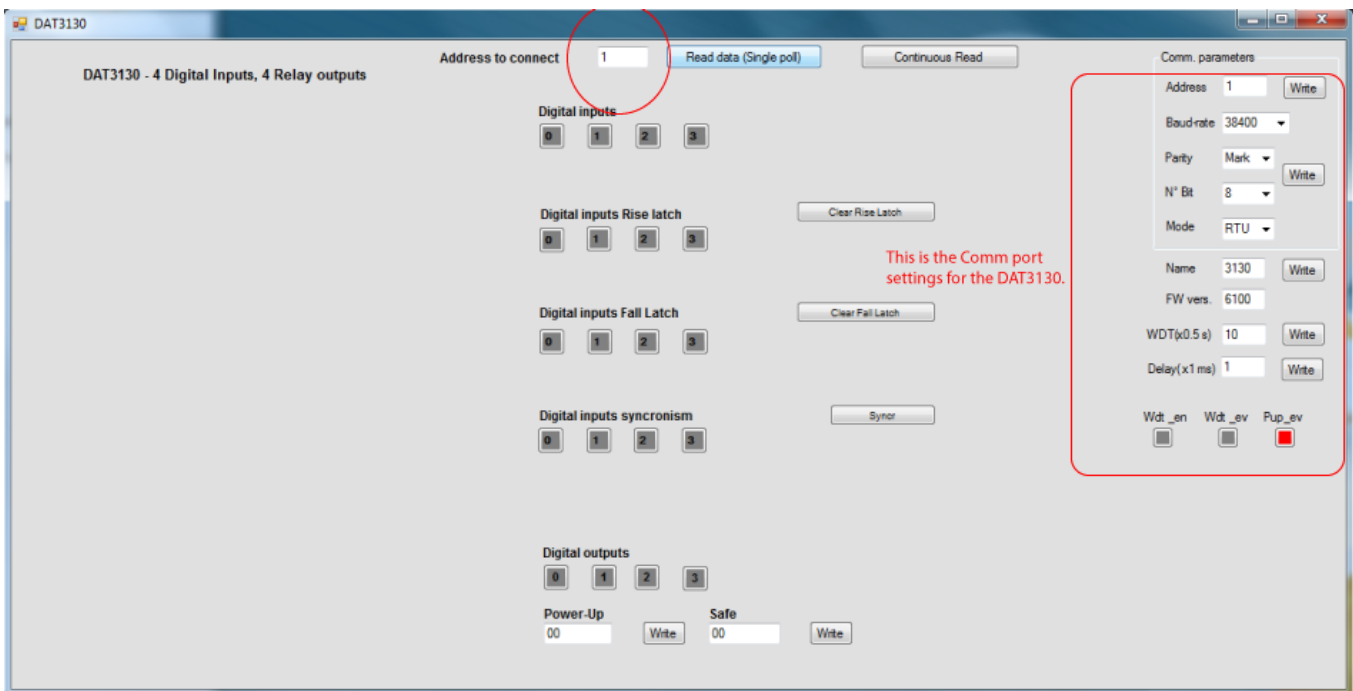
Selecting the Modbus Digital Input Relay Output Module.

1. The green light only indicates the port is open. Even if the settings are incorrect the light will turn green.
2. Select Model and the drop down navigation will appear.
3. Select DAT3130.



Setting the address of the DAT3130 Modbus Slave.

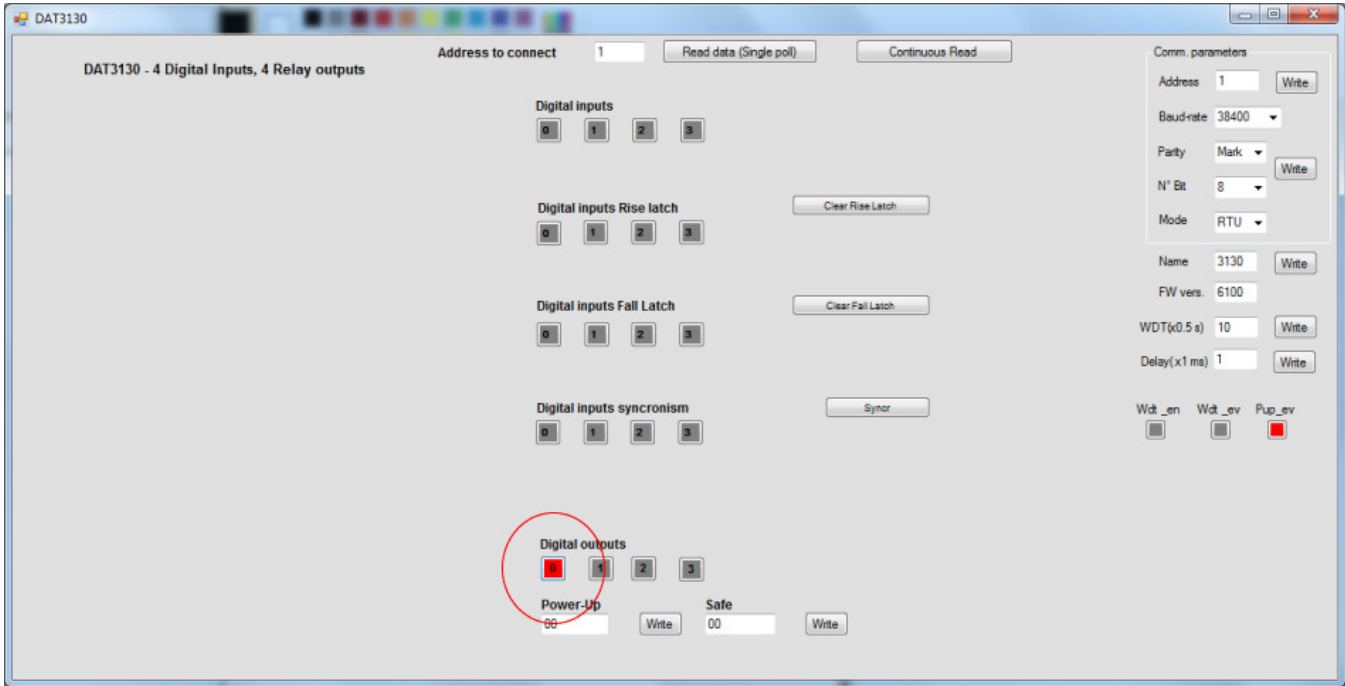
1. Change the Address to connect to 1 or what is written on the label.
2. Click “Read data” (Single poll).
3. The screen should now display the below screen.
4. If there is a function error, no CRC match, check Baud rate, RS485 connection or Modbus Slave Address.
5. This needs to be fixed before further progress. If you have not used the INIT on terminals C and D, it is highly recommended that you do now. Then return to Communication set up and set the settings to 9600bps, RTU, Data Bit 8, Stop Bit1, Parity None.
6. This will always be the correct setting unless it differs on the label.
7. The Comm settings in the red box are the settings without the INIT connect.
8. Should you need to change the Comms setting you can do, but they only take effect when the INIT short has been removed and power recycled.



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Checking the relay output operation of the DAT3130 Modbus RTU.

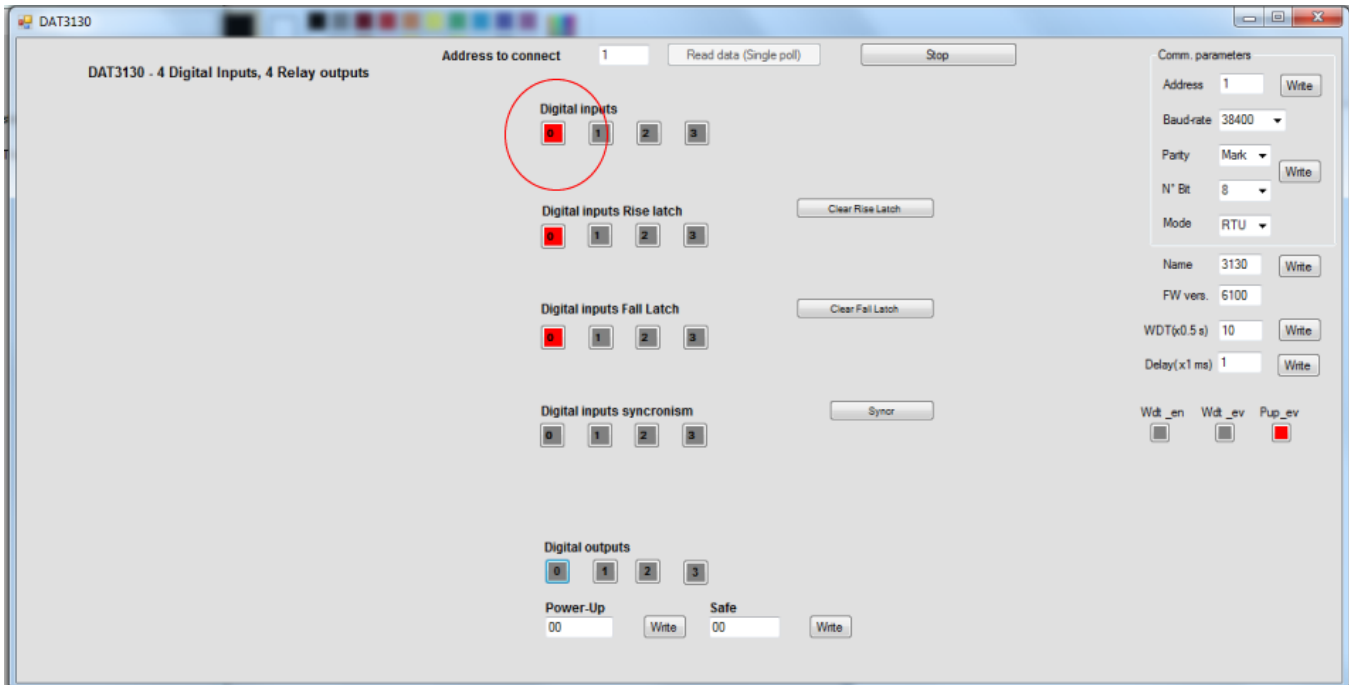
1. Measure the resistance across relay output terminals 1 and 2. It should be open circuit.
2. Click the 0 tab inside the box next to the Digital Output label.
3. You should be able to hear the relay operation and measure the low resistance across the Modbus relay output Slave terminals 1 and 2, relay out 0.



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Digital input DAT3130 Modbus Slave.

1. Connect 24Vdc to the Input terminals 18 and 19.
2. Click Continue read.
3. The channel 0 box under the Digital Input should change state to red.
4. Remove the 24 Vdc and the box should return to gray.



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Explanation of Communication parameters for Modbus Slave DAT3130.

Address

The actual address of the DAT3130 connected.

Baud rate

The actual baud rate of the DAT3130 connected.

Parity

The actual parity mode of the DAT3130 connected.

N°Bit

The actual number of bit selection of the DAT3130 connected.

Mode

The actual Modbus modality (RTU or ASCII) set for the DAT3130 connected.

Name

The string read from the DAT3130 of 4 ASCII characters used to name it example DAT3130.

FW Vers

The firmware version read from the DAT3130.

WTD (x0.5)

The watchdog time read from the DAT3130 is in steps of 0.5 seconds.

Delay (x1 ms)

The delay time between the reception of a query and transmission of the response. Expressed in steps of 1 millisecond.

Button Wdt_en

Indicates if the bit to enable the watchdog time of the device has been set: red indicates the bit is set, grey indicates the bit is not set.

Button Wdt_ev

Indicates if the watchdog timer event has occurred: red if the event occurs, grey if the event has not occurred. This condition is also signaled by the blinking of the led "PWR" of the device and the safe state of the digital outputs.

Button Pup_ev

Indicates if the Power up event has occurred: red if the event has occurred, grey if the event has not occurred. This condition is also signaled by the power-up state of the digital outputs.

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