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9 | Set Up Port 1 Serial

1. Change the **Description** of the serial port if needed.
2. Set the **Mode** to RS-232, RS 422 (4 wire), RS 485 (2 wire) or RS 485 (4 wire).
3. Set the **Baud Rate** to control the speed of the port. Valid speeds range between 75 and 230,400 bits per second.
4. Set **Data Bits** to control the number of bits in each character. Only 8 bits is valid when the protocol of the device connected to the port is RTU.
5. **Stop Bits** controls the number of bits for end of character.
6. **Parity** controls the error checking mode, with options of No Parity, Odd, Even, Mark and Space.

10 | Set Up Modbus TCP

1. Select the **Attached** as **Master** or **Slave**.
2. Select the **Modbus** protocol to be used, either **RTU** or **ASCII**.
3. As needed, check option boxes for “**Enable Modbus broadcast**,” “**Enable OBh Exception**” and “**Enable serial message buffering**.”
4. Select from 0 to 5 **Modbus Serial Retries**.
5. Enter **Milliseconds Modbus Message Timeout**, from 1 to 65535.
6. Enter **Milliseconds TX Delay**, from 1 to 65535.
7. Set up “Port 2 Modbus” the same (only if it has a Port 2).

11 | Set Up Port 1 ID Remap

1. Only use this screen if Modbus Slave IDs are to be remapped.
2. On each line, select a range of serial ports to remap. In the 1st box enter the first serial port of the range to remap FROM. Valid port IDs range from 1 to 255.
3. 2nd box - enter the last serial port of the range to remap.
4. 3rd box - enter starting ID of the range to remap TO.
5. 4th box auto fills based on ranges entered in first three columns.
6. Set up “Port 2 Remap” the same, only if it has a Port 2.

12 | Set Up Modbus ID Routing

1. Only use this screen if **Modbus Slave IDs** are to be re-routed.
2. On each line select the range of **IDs** to re-route. In the 1st box enter the starting ID. Valid IDs range from 1 to 255.
3. 2nd box – enter the last **ID** of the range to re-route.
4. 3rd box - enter **IP Address** or **Port** with slave devices attached.
5. 4th box shows the IP address of the slave device, if an IP address is chosen in the third box.

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13 | Set Up Modbus Priority

1. Only use this screen if **Modbus Priority** is to be set.
2. Enter up to five different priorities, based on **Originating IP Address, Modbus ID, Modbus Function Code**, or a combination of these.
3. **IP Address** sets a static IP address for the Modbus gateway.
4. **Modbus ID** has a valid range from 1 to 255.
5. **Function Code** has a valid range from 1 to 99.

14 | Save and Log Out

1. If you have completed the configuration, click **Save** to save the configuration to the serial server.
2. To Logout, click the **Logout** button.

16 | To Test and Verify Operation

- The primary check for correct operation is the device LEDs. See Section 2 this document for more information.
- For advanced information, see the **Modbus Configuration Manager** menu at the top of Vlinx Manager screen.
- Select **Diagnostic** for a check of communications status with attached MESR9xx device, and then select the device for which the communications check is desired.
- A report of reply times and ping statistics is generated and can be saved.
- Select **Monitor** to review activity logs of attached MESR9xx devices, then select the device for which logged information is needed.
- Logged information includes: **Time, Source & Destination, Type of event, Subscriber ID, Data** collected, and Information the Vlinx Manager program has gathered since current login of the affected device.

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+ QUICK START GUIDE



MESR900 series
MESR9xx Modbus Gateway

Before you begin, be sure you have the following:

- + Vlinx MESR9xx module
- + This Quick Start Guide
- + CD with Modbus Gateway Manager S/W and manuals
- + Network Cable/s (not included)
- + Serial Cable/s (not included)
- + Power Supply (not included)

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1 | Install the Hardware

1. Connect a 10-48 VDC (58 VDC maximum) power supply (sold separately). 4W for MESR90x, 6W for MESR92x.
2. Connect the top RJ45 connector to a network drop using a standard network cable (lower RJ45 is pass-through Ethernet on the model shown below).
3. Connect the serial device(s):
 - RS-232 with DB9: straight-through for DCE device, null modem for DTE device.
 - RS-232/422/485 with terminal blocks. See Appendix D in User Manual for pin outs.

UL Installation Information:

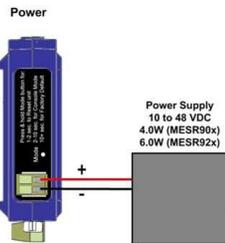
- One Conductor Per Terminal
- Use Copper Wire Only
- Wire Size: 28 to 16 AWG
- Tightening Torque: 5 KG-CM
- Wire Temperature Rating: 105 °C Minimum (Sized for 60 °C Ampacity)
- 80 °C Maximum Surrounding Ambient Air Temperature

SUITABLE FOR USE IN CLASS 1, DIVISION 2 GROUPS A, B, C, AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS 1, DIVISION 2.

Models with Single Terminal Block for Data (See Manual for DB9 Pins)

	RS-422/485 4-Wire	RS-485 2-Wire
A	TDA(-)	Data A(-)
B	TDB(+)	Data B(+)
C	RDA(-)	-----
D	RDB(+)	-----
E	GND	GND



Models With Dual Terminal Block for Data

	RS-422/485 4-Wire	RS-485 2-Wire	RS-232
A	TDA(-)	Data A(-)	RTS (Output)
B	TDB(+)	Data B(+)	TD (Output)
C	RDA(-)	-----	CTS (Input)
D	RDB(+)	-----	RD (Input)
E	GND	GND	GND

2 | LED Status

LED	STATUS
Ready	Blinks if system is operating correctly, once per second normally or three times per second for configuration mode or when reset to factory defaults.
Port 1/Port 1	ON indicates serial port open; blinks when data present (Port 2 present on 2 serial port units only).
E1/E2	ON indicates Ethernet has a link; blinks with data traffic (E2 present on 2 Ethernet port units only).

3 | Mode Switch

HOLD MODE SWITCH IN for...	RESULT
0 to 2 seconds	Initiates a Hardware Reset.
2 to 10 seconds	Enters Console Mode.
Over 10 seconds	Reset to Factory Defaults.

4 | Install Modbus Gateway Software

1. Insert the included CD and it should autostart.
 2. Follow the prompts to install the Modbus Gateway software.
- Note: Be sure you have administrative rights and disable firewalls.

5 | Set Up Modbus Gateway Software

1. Open Vlinux Manager by clicking:
 - Start Programs → B&B Electronics → Vlinux → Modbus Gateway Manager → Configuration Manager

The Device Discovery page opens.

NOTE: If the device does not connect, cycle (unplug-replug) the power, then try again to connect.

2. To configure via the network, select **Network**.
3. If you know the IP address, select "The device is at this address," and type in the IP address.
4. If not, select "I don't know the IP address of the device."
5. Click **Connect**.

OR...Set Up the Web Interface:

1. Open a browser and type the IP address of the Modbus Gateway in the Address Bar.
2. When the Modbus Gateway is found, the Login window appears.

6 | Log In

1. Click **Login**. Password is blank from factory, no password is necessary to operate the MESR unit.

The Configuration/General page appears.



7 | Set Up Network

I want **DHCP** is preselected to set up the network using dynamic IP addressing. The Modbus Gateway is set up at the factory to receive an IP assignment from a DHCP Server. If a DHCP Server is not available on your network, it will default to **169.254.102.39**.

If a DHCP server is not available and the default address does not work on your PC, change your PC network settings to IP Address: 169.254.102.1, Subnet Mask: 255.255.0.0, Default Gateway: 169.254.102.100. If you are not able to use these settings in your installation, refer to page 17 of the user's manual for directions to change the Modbus Gateway's TCP/IP settings.

8 | Set Up Modbus TCP

Modbus TCP Settings:

- Connect to Port identifies TCP port used in TCP Client Mode. Valid range is 1 to 65535.
- Response timeout is the maximum response time. Valid range is from 1 to 65535.

TCP Server Settings:

- Listen on Port identifies TCP port in TCP Server Mode. Valid range is from 1 to 65535.
- Limit the Number of Connections...Controls the number of simultaneous TCP clients that can be connected.
- "...allow everyone," "...allow specific IP address" & "allow a range of IP addresses" are Connection Filter Mode options, controlling which TCP clients can connect.