

9 | Set Modbus Priority

Use this screen if Modbus Priority is to be set.

Enter up to five different priorities, based on Originating IP Address, Modbus ID, Modbus Function Code, or a combination of these.

Modbus ID has a valid range from 1 to 247.

Function Code has a valid range from 1 to 99.

10 | Set Modbus Priority

If you have completed the configuration, click **Save** to save the configuration to the serial server. Allow 15 seconds for the Gateway to reboot.

Click **Connect**. You should see a list of all devices on the network, including your new device. If you do not see your new device, please refer to the Troubleshooting tips. You may now log out.

11 | Troubleshooting

The primary check for correct operation is the device LEDs.

For advanced information, see the Configuration Manager menu, at the top of Vlinx Modbus Gateway screen.

Select **Diagnostic** for a check of communications status with attached MESR424/s 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 MESR424 device/s, then select device for which logged information is needed.

Logged information includes Time, Source & Destination, Type of Event, Subscriber ID, Data Collected, and Information the Vlinx Modbus Gateway Manager program has gathered since current login of the affected device.

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

12 | UL Class 1 / Division 2

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.
CONVENANT À L'EMPLOI DANS LES SITES DANGEREUX DE CLASSE I, DIVISION 2, GROUPES A, B, C ET D, OU DANS LES SITES NON HASARDEUX SEULEMENT

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

ATTENTION - DANGER D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS PEUT ENTRAÎNER UNE ADÉQUATION À LA CLASSE I, DIVISION 2.

Maximum Surrounding Air Temperature: 80 °C
Température maximale de l'air ambiant: 80 °C

The unit is to be powered by a Class 2 power source, of a grounded-type, when power is applied to the barrel connector.
L'unité doit être alimentée par une source d'alimentation de classe 2, de type mise à la terre, lorsque le connecteur du canon est alimenté.

THE POWER CABLE MUST HAVE A MINIMUM RATING OF 80°C.
LE CÂBLE D'ALIMENTATION DOIT AVOIR UNE INDICATION MINIMALE DE 80 °C.

Power cannot be applied to both the terminal block and barrel connectors simultaneously.
L'alimentation ne peut pas être appliquée simultanément aux connecteurs du bornier et du barillet.

The use of coaxial cable for the field wiring shall be in accordance with Class 2/Class 3 requirements in Article 725 of the NEC.
L'utilisation d'un câble coaxial pour le câblage sur site doit être conforme aux exigences de classe 2 / classe 3 de l'article 725 du NEC.

One Conductor Per Terminal
Un conducteur par borne


Use Copper Wire Only
Utiliser uniquement du fil de cuivre

Wire Size: 28 to 16 AWG
Taille de fil: 28 à 16 AWG

Tightening Torque: 5 KG-CM
Couple de serrage: 5 KG-CM

Wire Temperature Rating: 105 °C Minimum (Sized for 60 °C Ampacity)
Indice de température du fil: 105 °C Minimum (calibré pour 60 °C)

80 °C Maximum Surrounding Ambient Air Temperature
80 °C Température ambiante maximale



Recommended Accessories

- # PS12BVLB-INT-MED Power Supply
- # 232NM9 Null Modem Crossover Cable for DTE to DTE Connection

B+B SMARTWORX

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+ QUICK START GUIDE



MESR424D



MESR424T

Model MESR424D or MESR424T

Industrial Modbus
Ethernet to Serial Gateway

Before you begin, be sure you have the following:

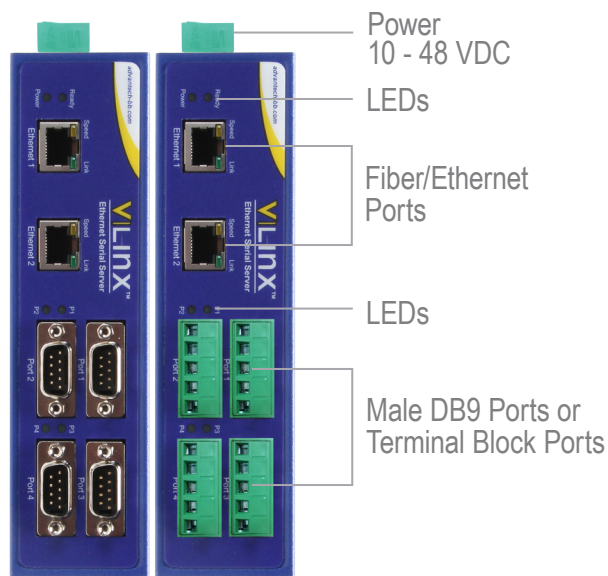
- + MESR424x unit
- + CD with Software and Manual/s
- + Mounting Accessories Kit
- + Additional items **required** but not included:
 - Ethernet cable(s)
 - Null modem cable(s)
 - Power supply for terminal block or barrel connector

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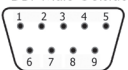
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Fast and easy on the web: www.advantech-bb.com

Product Overview



DB9 Male Outside



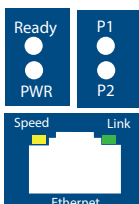
DB9M Pin	RS-232	Direction (RS-232)	RS-422/485 4-Wire	RS-485 2-Wire
1	DCD	Input	RDA(-)	-
2	RD	Input	RDB(+)	-
3	TD	Output	TDB(+)	Data B(+)
4	DTR	Output	TDA(-)	Data A(-)
5	GND	-	GND	GND
6	DSR	Input	-	-
7	RTS	Output	-	-
8	CTS	Input	-	-
9	-	-	-	-

LEDs

Power	Off	Power is not connected.
	On	Power is connected.
Ready	On	System is in Console Mode.
	Blink	System is in Normal Mode.
P (1-4)	Blink	Data present on serial port.

RJ45 Ethernet Port LEDs

Speed	Off	10BaseT connection.
	On	100BaseT connection.
Link	On	Ethernet connected.
	Blink	Data present on Ethernet port.



1 | Set Up Hardware

1. Power the device.
2. Connect the top RJ45 to a network drop using a standard network cable. (RJ45 ports on the model shown are interchangeable. One may be used for pass-through Ethernet.)
3. Connect the Serial Device(s). RS-232 with DB9: straight-through for DCE device. Null modem for DTE device. RS-422/485 with terminal blocks.

2 | Installation & Setup

1. Use included CD to install Vlinx™ Modbus Gateway Manager. If Autorun does not start, go to "My Computer" and select the CD drive. You will see a Vlinx MESR icon. Double-click it to launch the installation.
2. To open Vlinx Modbus Gateway Manager, click:
Start\Programs\B&B Electronics\Vlinx\Vlinx Modbus Gateway Manager
Note: If the device does not connect, cycle (unplug-replug) power, then try again.
3. To configure via the network, select **Network**.
4. If you know the IP address, select *"The device is at this address,"* and type in the IP address. If not, select *"I don't know the IP address of the device."* Click **Connect**.

Alternate Method: Open a web browser and type the IP address of the Gateway in the Address Bar. When the Gateway is found, the Login window will appear.

5. Click **Login**. Password is blank from factory. No password is necessary to operate the MESR unit. The Configuration/General page appears.

3 | Set Up Network

"I want DHCP" is preselected to set up the network using dynamic IP addressing. The gateway is set up at the factory to receive an IP assignment from a DHCP Server.

1. If a DHCP Server is not available on your network, it will default to 169.254.102.39.
2. 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: 169.254.1.1.

If you are not able to use these settings, refer to the user manual for directions to change the Gateway's TCP/IP settings.

4 | Setting Up TCP Option

Note: Vlinx Modbus Gateway Manager software contains default parameter values that are common to most Modbus networks.

TCP Settings:

"Connect to port" identifies TCP port used in TCP client mode. Valid range is 1 to 65535. Default is 502. Response timeout is the maximum response time. Valid range is from 1 to 65535. Default is 100ms.

TCP Server Settings:

Listen on Port identifies TCP port in TCP server mode. Valid range is from 1 to 65535. Default is 502.

Limit the Number of Connections controls the number of simultaneous TCP clients that can be connected.

Connection Filter Mode options like "allow everyone," "allow specific IP address" and "allow a range of IP addresses" control which TCP clients can connect.

5 | Set Up Serial Port

Note: Vlinx Modbus Gateway Manager software contains default parameter values that are common to most Modbus networks.

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 rates range between 75 and 230.4k bits per second.
4. Set the 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. Top 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.

6 | Set Up Modbus Port

Select the Attached as Master or Slave.

1. Select the Modbus protocol to be used, either RTU or ASCII.
2. As needed, check option boxes for "Enable Modbus broadcast," "Enable 0Bh Exception" and "Enable serial message buffering."
3. Select from 0 to 5 Modbus Serial Retries.
4. Enter Milliseconds Modbus Message Timeout, from 1 to 65535.
5. Enter Milliseconds TX Delay, from 1 to 65535.
6. Set up additional Modbus ports the same way.

7 | Set Up Port ID Remap

Use this screen if Modbus Slave IDs are to be remapped. On each line, select a range of Modbus IDs to remap.

1st box - enter the first Modbus ID of the range to remap FROM. Valid port IDs range from 1 to 247.

2nd box - enter the last ID of the range to remap.

3rd box - enter starting ID of the range to remap TO.

4th box - auto fills based on ranges entered in first three columns. Set up additional ID ranges the same way.

8 | Set Modbus ID Routing

Use this screen if Modbus Slave IDs are to be rerouted.

On each line, select the range of IDs to re-route.

1st box - enter the starting ID. Valid IDs range from 1 to 247.

2nd box - enter the last ID of the range to re-route.

3rd box - enter the IP Address or Port that has slave devices attached.

4th box - shows the IP address of the slave device, if an IP address is chosen in the third box.