MESR900 Series Copper Modbus Gateways bridge devices on Modbus serial networks (RS-232, RS-422 or RS-485) with those on Modbus TCP networks, allowing seamless integration. Serial ports can be accessed over a LAN or WAN using Direct IP Mode connections. Supporting up to 16 masters and 32 slaves, these gateways feature auto-detecting 10/100 copper and fiber optic options. Serial data rates up to 230 kbps ensure maximum network flexibility.

MESR900 Series Copper Modbus Gateways are built for use in industrial environments, featuring a slim IP30 DIN rail mountable case. They operate from a range of DC power supply voltages and have pluggable terminal block connectors. An external power supply, sold separately, is required.

MESR90x models have one Ethernet port.

MESR92x models have an additional Ethernet port that functions much like an Ethernet Switch, allowing pass-through connectivity for other Ethernet devices. This port can also be used to “daisy chain” multiple gateways.

Easy-to-use software is designed for Windows 2000, 2003 Server, XP, Vista, 2008 Server, 7, 8, 10.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>SERIAL PORTS</th>
<th>SERIAL CONNECTOR</th>
<th>ETHERNET PORT</th>
<th>ETHERNET CONNECTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB-MESR901†</td>
<td>1</td>
<td>DB9 or Terminal Block</td>
<td>(1) Copper</td>
<td>RJ45</td>
</tr>
<tr>
<td>BB-MESR902T</td>
<td>2</td>
<td>Terminal Block</td>
<td>(1) Copper</td>
<td>RJ45</td>
</tr>
<tr>
<td>BB-MESR921</td>
<td>1</td>
<td>DB9 or Terminal Block</td>
<td>(2) Copper</td>
<td>(2) RJ45</td>
</tr>
<tr>
<td>BB-MESR922T</td>
<td>2</td>
<td>Terminal Block</td>
<td>(2) Copper</td>
<td>(2) RJ45</td>
</tr>
</tbody>
</table>

† NEMA TS2
Fiber port options available. Contact B+B SmartWorx.

ACCESSORIES – sold separately

- BB-MDR-20-24 - 24VDC, 1.0 A output power, DIN rail mount power supply
- BB-MDR-40-24 - 24VDC, 1.7 A output power, DIN rail mount power supply
- BB-DRPM25 - 35mm DIN Rail to Panel Mount Adapter Bracket, 25mm wide
- BB-TBKT1 - Replacement Terminal Block - 2-position, 5.08mm, 8A, 30
- BB-TBKT2 - Replacement Terminal Block - 5-position, 5.08mm, 8A, 30

All product specifications are subject to change without notice.

MESR900 Copper Series_1119ds
**Industrial Modbus Ethernet to Serial Gateways**

**MESR900 Series - Copper Models**

### SPECIFICATIONS

#### SERIAL TECHNOLOGY

<table>
<thead>
<tr>
<th>Technology</th>
<th>RS-232</th>
<th>RS-485 2-Wire</th>
<th>RS-422/485 4-Wire</th>
<th>Serial Connector</th>
<th>Data Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD, RD, RTS, CTS, DTR, DCR, DTD, GND</td>
<td>Data A(-), Data B(+), GND</td>
<td>TDA(+), TDB(+), RDA(-), RDB(+), GND</td>
<td>DB9M or Removable Terminal Blocks; 12 to 28 AWG</td>
<td>Up to 230.4 Kbps</td>
<td></td>
</tr>
</tbody>
</table>

#### POWER

<table>
<thead>
<tr>
<th>Source</th>
<th>External, required (not included, sold separately)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>10 to 48 VDC (58 VDC, maximum)</td>
</tr>
<tr>
<td>Connector</td>
<td>Removable Terminal Block (12 to 28 AWG)</td>
</tr>
</tbody>
</table>

#### POWER CONSUMPTION

- **BB-MESR90X**: 4.0 Watts
- **BB-MESR92X**: 6.0 Watts

#### MECHANICAL

- **LED Indicators**: Serial Port, Ethernet Link, Ready
- **Switches**: Reset Button
- **Dimensions**: BB-MESR90x: 11.94 x 8.03 x 2.96 cm (4.70 x 3.16 x 1.16 in); BB-MESR92x: 14.86 x 10.11 x 2.96 cm (5.85 x 3.98 x 1.16 in)
- **Weight**: BB-MESR90x: 149.7 g (0.33 lb); BB-MESR92x: 204.1 g (0.45 lb)

#### ENVIRONMENTAL

- **Operating Temperature**: -40 to +80 °C (-40 to +176 °F)
- **Operating Humidity**: 0 to 95%, non-condensing

#### MEANTIME BETWEEN FAILURES (MTBF)

- **BB-MESR90x**: ~132309 hours
- **BB-MESR92x**: ~102593 hours

#### NETWORK

- **Serial Memory**: 8 KB per port
- **Network Memory**: 4 KB
- **LAN**: 10/100 Mbps, auto-detecting
- **Ethernet**: IEEE 802.3 auto-detecting & auto MDI/MDX 10/100

### PROTOCOLS

- **Protocols**: TCP, IPv4, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP
- **IP Mode**: Static, DHCP
- **TCP**: User definable

### OTHER

- **Mode**: Modbus RTU Master / Slave
- **Search**: Serial direct COM and Ethernet Auto Search or specific IP
- **Diagnostics**: Display PC IP, ping, test VCOM, save test config. (text readable)
- **Firmware Upgrade**: via Vlinx Manager

### ETHERNET PASS-THROUGH PORT (MESR92X)

- **Standards**: IEEE 802.3, 802.3u, 802.3x
- **Processing Type**: Store & Forward with 802.3x full duplex, non-blocking flow control
- **Flow Control**: IEEE 802.3x flow control, back pressure flow control
- **MAC Address Table**: 2K

### CONFIGURATION SOFTWARE

- **Vlinx Manager - Windows O/S**: 2000, XP, 2003 Server, Vista, 2008 Server, 7, 8, 10 (32/64 bit)

### APPROVALS / DIRECTIVES / STANDARDS

- **Compliance**: FCC, CE
- **UL**: UL Listed
- **CE - Directives**: 2014/30/EU - Electromagnetic Compatibility (EMC) 2011/65/EU - Reduction of Hazardous Substances (RoHS) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)

### MECHANICAL DIAGRAMS

**MESR90X Models**

**MESR92X Models**